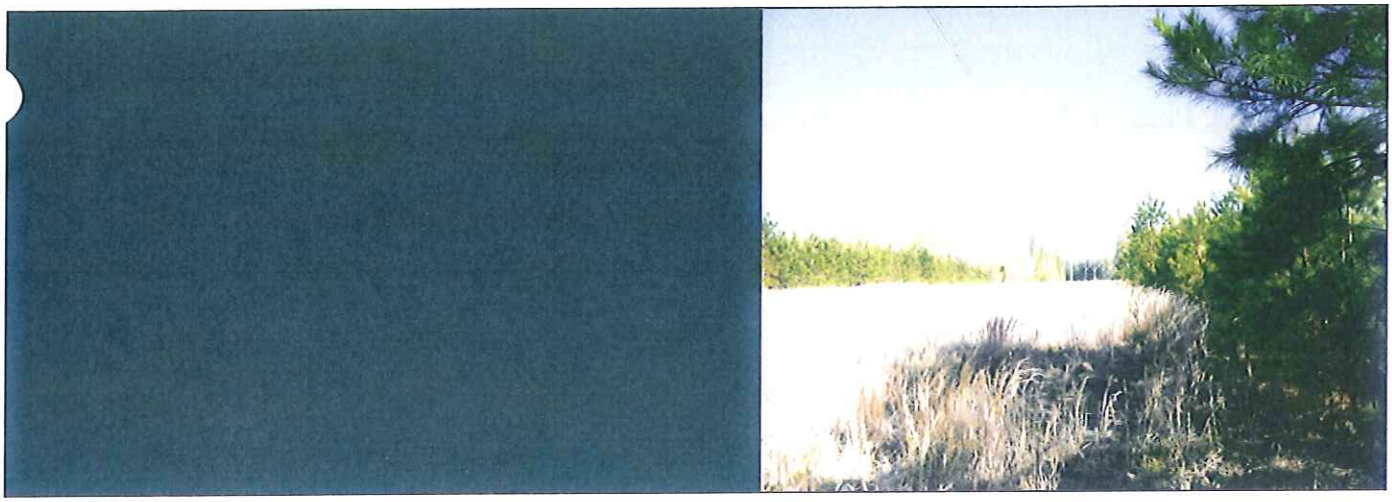

A Phase I Archaeological Resources Survey of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Corridor

FAIRFIELD, LEXINGTON, NEWBERRY AND RICHLAND COUNTIES,
SOUTH CAROLINA

July 2011

Brockington
CULTURAL RESOURCES CONSULTING

A Phase I Archaeological Resources Survey of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Corridor
Fairfield, Lexington, Newberry and Richland Counties, South Carolina

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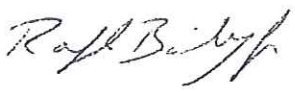

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July 2011

MANAGEMENT SUMMARY

From the 21st of March to the 8th of April 2011, Brockington and Associates, Inc. (Brockington), conducted a Phase I archaeological resources survey of an approximately 20-mile section of the South Carolina Electric and Gas (SCE&G) VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, located in Fairfield, Lexington, Newberry and Richland counties, South Carolina. The proposed transmission line extends from the Lake Murray 230/115 kV Substation, located west of Irmo, South Carolina, to just south of the Virgil C. Summer (VCS) Nuclear Station in Jenkinsville, South Carolina.

This investigation was carried out for PIKE Energy Solutions, LLC for the purpose of determining if any historic properties would be affected by ground disturbance associated with the construction and development of the newly proposed 230 kV transmission line. Prior to the commencement of this investigation a cultural resources study plan was submitted by SCE&G and approved by the South Carolina State Historic Preservation Office (SCSHPO) and the US Army Corps of Engineers. This study plan addresses how SCE&G will identify, assess, and protect cultural resources which could be impacted by the construction, operation, and maintenance of the VCSNS Units 2 and 3 and all associated 230 kV transmission lines. A subsequent and complimentary historic resources windshield survey was conducted for the proposed St. George No. 1 and Lake Murray No. 2 lines and will be submitted to SCE&G for purposes of data analysis.

This archaeological resources survey is part of the Section 106 compliance requirements pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, as administered by the US Army Corps of Engineers. Survey methods undertaken during the investigation process were conducted in compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended through 2000), and 36 CFR 800 (Protection of Historic Properties). Survey tasks were completed in compliance with criteria defined under the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61).

Primary archaeological resource investigations involved systematic 30-meter interval shovel testing along transects spaced 30 meters offset east and west from the proposed transmission corridor centerline for the length of the corridor. This is the area of potential effect (APE) for the proposed undertaking. The proposed transmission line will tie in at the existing Lake Murray 230/115 kV Substation located east of the Dreher Shoals Dam and south of Bush River Road and run approximately 20 miles north northwest to a proposed future substation located immediately southeast of the VCS Nuclear Station. This archaeological resource investigation also includes a review of previously recorded archaeological sites within or near the proposed transmission corridor, and a thorough pedestrian survey within the corridor's proposed APE.

Background research was conducted at the South Carolina Institute of Archaeology and Anthropology (SCIAA) of Columbia, South Carolina, to determine if any previously recorded archaeological sites exist within the footprint of the proposed corridor. In addition, the list of National Register of Historic Places (NRHP) properties was reviewed at the SCIAA. One previously

recorded archaeological resource (38LX0436) has been recorded within the footprint of the proposed corridor. Site 38LX0436 is listed as not eligible for the NRHP and has since been destroyed. It currently lies beneath the Saluda Dam substation. A number of additional archaeological resources have been previously identified within a half-mile of the proposed transmission line corridor. None of these sites fall within the proposed APE and no previously recorded NRHP eligible or listed site will be affected by the proposed development.

In total, 1,415 shovel tests were excavated along the approximately 20-mile proposed transmission line corridor, resulting in the identification of four previously unrecorded archaeological sites. Two of these sites, 38LX610 and 38LX611, are low-density prehistoric lithic and artifact scatters. Site 38RD1380 is a low-density historic artifact scatter and a standing structure (located outside the APE) while 38RD612 represents a multi-component prehistoric and historic artifact scatter. These sites are typical of low-density prehistoric and historic scatters located throughout the southeast and do not generally display the wealth of material and features often associated with significant archaeological resources in South Carolina. The research potential of these sites is extremely limited and overall, these sites do not warrant further study. They are all, therefore, recommended not eligible for the NRHP.

The VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor investigation resulted in the identification of four previously unrecorded archaeological sites. The sites are recommended not eligible for NRHP listing. Brockington recommends no further research necessary in regard to these newly identified archaeological sites. The proposed VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor will have no effect on any previously identified or newly recorded archaeological resources.

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1.0 INTRODUCTION AND METHODS OF INVESTIGATION

1.1 INTRODUCTION

In March and April of 2011, Brockington and Associates, Inc. (Brockington) conducted a Phase I archaeological resources survey of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor located in Fairfield, Lexington, Newberry and Richland counties, South Carolina. The proposed transmission line extends from the Lake Murray 230/115 kV Substation, located west of Irmo, South Carolina, to just south of the Virgil C. Summer (VCS) Nuclear Station in Jenkinsville, a distance of approximately 20 miles (Figure 1.1). This Phase I archaeological resources survey was conducted for PIKE Energy Solutions, LLC as the development of new transmission line easement will require federal permitting pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, as administered by the US Army Corps of Engineers. The project scope included background research and an intensive archaeological field survey. These task orders were conducted in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended), and Section 404 of the Clean Water Act of 1948 [33 USC 1344] (as amended). The Principal Investigator for this project meets the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (36 CFR part 61) and is listed on the Register of Professional Archaeologists.

1.1.1 Project Scope and Effect

The VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No. 1 Transmission Line Corridor will largely be constructed within existing SCE&G rights-of-way (ROW) and will be approximately 102-miles long. This archaeological resources study addresses approximately 20 miles of those lines (as shown in Figure 1.1). The approximately 20 miles investigated for this report require clearing to accommodate new lines and associated structures. Fourteen (14) of those miles will require new ROW adjacent to the existing SCE&G transmission line corridor and will require clearance along one side of the centerline. The remaining six (6) miles of the proposed corridor will not follow any existing transmission line route; therefore development within this portion would involve new ROW clearance along both sides of the proposed centerline. For this project, the area of potential effect (APE) for the new ROW was defined as 30 meters from either side of the proposed centerline along the 14-mile route, and 30 meters from both sides of the center line along the remaining six miles. Clearing of the centerline, along with any associated soil disruption, will occur primarily within this 30- to 60-meter ROW corridor.

Prior to the commencement of this investigation a cultural resources study plan was submitted by SCE&G and approved by SCSHPO and the USACE. This study plan addresses how SCE&G will identify, assess, and protect cultural resources which could be impacted by the construction, operation, and maintenance of the VCSNS Units 2 and 3 and all associated 230 kV transmission lines. This investigation addresses the archaeological aspects of this cultural resources plan. Before commencing construction of a 230 kV line by definition, SCE&G must file for and receive a Certificate of Environmental Compatibility and Public Convenience and Necessity from the

South Carolina Public Service Commission. SCE&G's policy and standard practice is to execute its comprehensive, three-phase transmission line siting process when siting new or portions of new 230

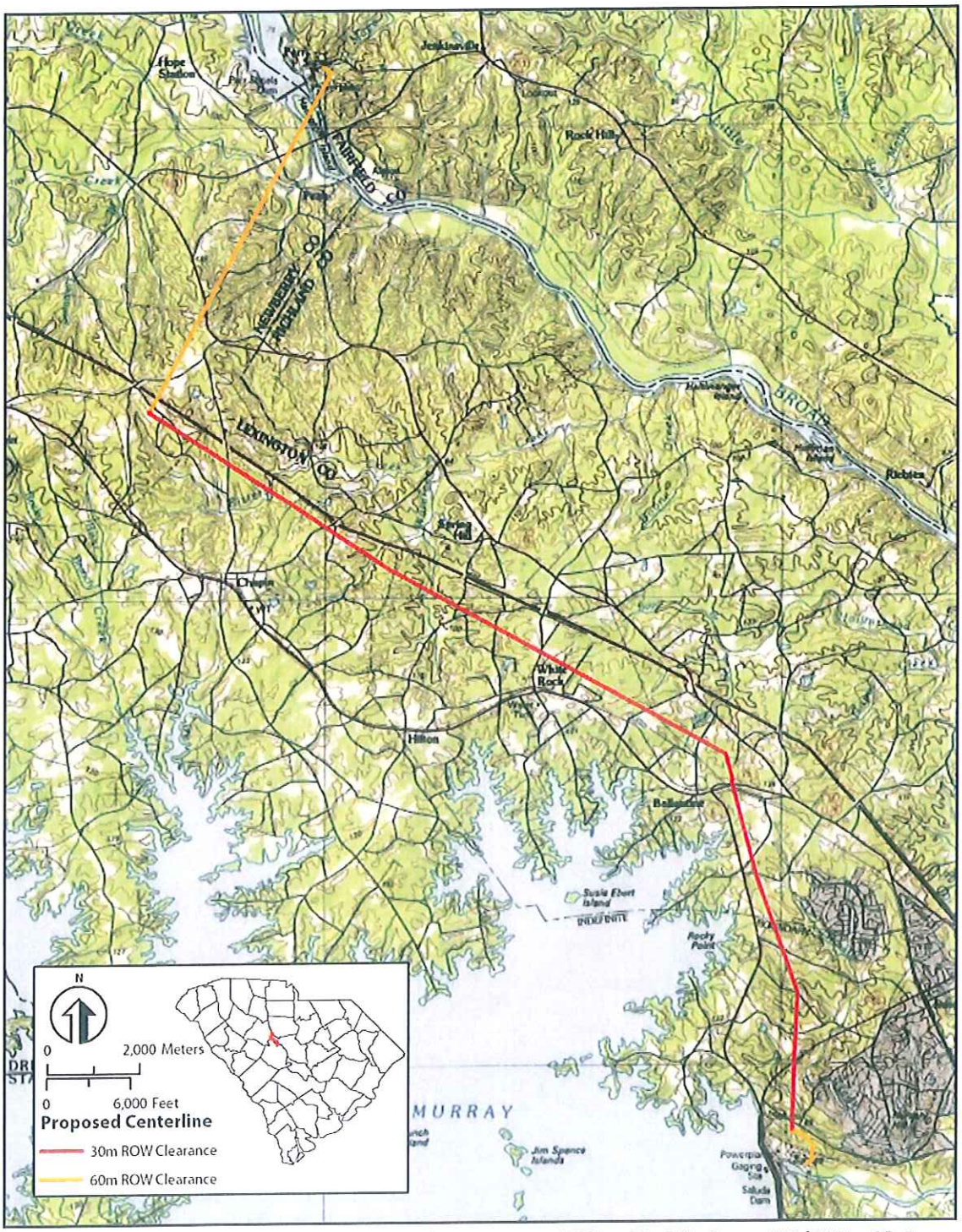

Figure 1.1 *Project Location Map of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, Fairfield, Lexington, Newberry and Richland Counties, South Carolina. (USGS 7.5' series Jenkins, Chapin, Richtex, and Irmo Quadrangles).*

kV lines that require the acquisition of right-of-way easements within new corridors. The siting process includes consideration of an array of environmental, land use, cultural resource, and aesthetic factors when developing alternate routes, evaluating them, and selecting final routes. All documented cultural resources within siting study areas are mapped, weighted to reflect sensitivity to transmission line construction, and applied in the siting study. Moreover, it is SCE&G's practice to conduct "windshield surveys" throughout siting study areas when executing its transmission line siting process for the purpose of identifying aboveground resources that may not be documented but are, nevertheless, judged by expert investigators to be eligible or potentially eligible for the NRHP. Once final routes have been selected and their precise locations have been surveyed, SCE&G contracts with qualified cultural resource consulting firms to conduct detailed surveys within the ROW, including any portions of existing SCE&G transmission line rights-of-way that will be utilized by the proposed line or lines. The completed cultural resources investigations are used by SCE&G as guidance in avoidance and mitigation planning. Therefore, application of SCE&G's transmission line siting process ensures that SCE&G will meet or exceed the requirements of the act when siting new corridors for 230 kV line routes. This survey was conducted in support of SCE&G commitment to fulfill its cultural resources obligation in regard to archaeological survey.

A subsequent and complimentary historic resources windshield survey was conducted for the proposed VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor and will be submitted to SCE&G for purposes of data analysis. The windshield survey covers a two-kilometer buffer of the existing and proposed ROWs (approximately 75.46 square miles) for the two portions of the proposed VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Lines. For this work, historians conducted a literature review to identify properties listed on the National Register of Historic Places (NRHP) and those recorded at the South Carolina Department of Archives and History (SCDAH). The windshield reconnaissance included a vehicular inspection of the previously recorded resources to determine if they are still extant. Historians also noted any previously unrecorded resources that appear to be NRHP-eligible based on their architectural integrity. The purpose of this point data is to assist in the wholesale analysis of the transmission line and to assist in the development of sensitive pole locations. Once the pole locations are determined, a viewshed analysis will delineate a visual Area of Potential Effect and a comprehensive Phase I architectural survey can be performed for the transmission line.

Although no cultural resources within the proposed transmission line ROW corridor are listed on the National Register of Historic Places (NRHP) or have been designated as National Historic Landmarks (NHL) the proposed transmission line corridor has never been examined in regards to the potential for containing significant archaeological resources. To this end, the established project goals include the location of all archaeological resources located within the proposed transmission line's easements. Four archaeological sites were identified during field investigations. These sites were evaluated per 36 CFR 60.4, which presents four broad evaluative criteria for assessing the significance of a particular resource and its eligibility for the NRHP. These criteria will be reviewed below in section 1.2.4.

1.2 METHODS OF INVESTIGATION

1.2.1 Project Objective

The proposed corridor route was evaluated for its potential to contain significant prehistoric or historic archaeological resources by first defining the environmental and cultural contexts. Environmental variables known to be associated with prehistoric and early historic settlement (i.e., soil drainage, proximity to water or wetland resources, relative elevation, and historic settlement patterns) were analyzed.

Comparing the environmental variables of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor to those of resources previously recorded in the surrounding area, it was expected that any prehistoric sites encountered would be most likely found on elevated and well drained areas near exploitable resources. Based on the distance to known historic settlements previously identified in the surrounding area, historic archaeological sites were considered likely. If such sites were to be found, they would be associated with past homesteading activities, local manufacturing, and possibly Civil War era activity. Because of the corridor's location on relatively level terrain, and the number of previously recorded archaeological resources, it was determined that the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor had a moderate potential for containing prehistoric archaeological resources and a low to moderate potential for containing historic archaeological resources.

Archaeological background research was conducted at the South Carolina Institute of Archaeology and Anthropology (SCIAA) and the NRHP listings at the South Carolina Department of Archives and History (SCDAH) were reviewed in order to identify previously recorded archaeological resources located within the boundaries of the project corridor. Additionally, background investigations also included an examination of archaeological site forms and previous undertakings conducted near the corridor.

1.2.2 Field Investigations

Archaeologists systematically inspected the approximately 20-mile proposed transmission route through the pedestrian traverse of one and two transects. Brockington excavated shovel tests at 30-meter intervals along these transects, which were placed 30 meters (98 feet) from the centerline. Shovel testing did not occur in wetland areas or in areas with steep slopes (areas with slopes greater than 15 percent). Archaeologists excavated a total of 1,415 shovel tests within the proposed ROW along the transmission route. Shovel tests were augmented by visual inspection in areas with good surface visibility.

Shovel tests measured approximately 30 centimeters (12 inches) in diameter and were excavated into sterile subsoil (i.e. clay). Fill from the shovel tests was screened through ¼-inch mesh hardware cloth. Records of each shovel test were kept in field notebooks, including information on content (e.g., presence or absence of artifacts, artifacts descriptions) and context (i.e., soil colors and texture descriptions, depth of definable levels, observed features). All shovel tests were backfilled on completion.

We followed the *South Carolina Standards and Guidelines for Archaeological Investigations* (COSCAPA et al. 2005) to complete the project. An archaeological site is defined as an area containing three or more artifacts of a possible single occupation in a 30-meter (98-foot) or less diameter of surface exposure; or where at least two shovel tests within 30 meters are positive (containing one or more artifacts); or where surface or subsurface cultural features are present. Artifacts of recent age (less than 50 years) would typically not define a site without a compelling research or management justification. Less than three artifacts in close proximity are categorized as isolated finds.

Generally, if a site were to be encountered, the site boundaries would be established by the absence of artifacts or features moving outward in cardinal directions from the defined site center. In areas demonstrating poor surface visibility, two negative shovel tests excavated at short intervals (7.5 or 15 meters) would be used to establish a site boundary. Areas in which sites were identified during the current survey demonstrated very good (76-100 percent) to excellent surface visibility. Due to the nature of ground surface visibility, site delineations were effected at 15-meter intervals augmented by exhaustive surface collection within the footprint of the APE. The definition of site boundaries also takes into account natural features and/or boundaries (e.g., streams, bluffs, swamps).

1.2.3 Laboratory Analysis and Curation

Pre-Contact artifacts are categorized into typological classifications determined by their technological and stylistic attributes. All nonresidual Pre-Contact ceramic sherds (those greater than two-by-two centimeters in size) are classified by surface decoration and aplastic content. When recognizable, these attributes are also recorded for residual sherds. Nondiagnostic residual sherds are cataloged as a group. Pre-Contact ceramic sherds are compared to published type descriptions from comparable sources (Anderson et al. 1996; Williams and Thompson 1999).

Lithic assemblages from survey and testing projects are sorted by raw material type and basic morphological characteristics. Lithic artifacts representing formal tools are classified using available published type descriptions (Cambron and Hulse 1986; Coe 1964; Justice 1987). Artifacts representing lithic debitage are sorted into categories based on flake characteristics. Attributes such as utilization and retouching are noted when present. Some general definitions of debitage categories follow.

Flake fragment - A portion of a broken flake that cannot be identified further; usually the striking platform is absent.

Shatter - Fragments from a core that do not have a striking platform or flaked characteristics; usually these are blocky in shape and associated with early-stage lithic reduction.

Block core - A core that has had flakes removed in a tabular fashion (lengthwise); usually these flakes have platform angles approaching 90 degrees.

Bifacial core - A core that has had flakes removed from opposite facing sides; usually these flakes have acute platform angles.

Primary reduction flake - A flake removed from a block or bifacial core having 95 to 100 percent of the cortex present on the dorsal surface.

Secondary core reduction flake - A flake removed from a block core and having 1 to 95 percent of the cortex present on the dorsal surface.

Tertiary core reduction flake - A flake removed from a block core and having no cortex present on the dorsal surface.

Bifacial reduction flakes - Flakes removed from bifacial cores; these usually have an acute striking platform angle.

Secondary bifacial reduction flake - A flake removed from a bifacial core and having 1 to 95 percent of the cortex present on the dorsal surface.

Tertiary bifacial reduction flake - A flake removed from a bifacial core and having no cortex present on the dorsal surface.

Thinning flake - A flake removed in either the retouch or resharpening stage, usually l centimeter or less in size.

Bipolar flake - A flake removed during bipolar reduction; this technique was used primarily on pebbles or on any core too small to hold in the hand while striking; bipolar flakes are generally wedge-shaped.

The basis of the Post-Contact artifact analysis is observable stylistic and technological attributes. Artifacts were identified by material of manufacture (e.g., ceramics, glass, metal), color, function, and method of manufacture, when possible. Temporally diagnostic artifacts were compared to published analytical sources. Lab personnel utilized sources appropriate to the types of artifacts found during the survey (in this case Post-Contact ceramics, nails, and glass artifacts) (Copeland 1982; Dieringer and Dieringer 2001; Jones and Sullivan 1985; Lorrain 1968; Nelson 1977; Sussman 2000; Wilson 1981).

All recovered artifacts were transported to Brockington's Atlanta facilities where they were washed, catalogued, and analyzed. Laboratory personnel assigned distinct provenience numbers to artifacts from each supplemental shovel test and nonsystematic surface find. They separated artifacts from each provenience by class/type and assigned catalogue numbers. Upon acceptance of the final report, analysis sheets, field notes, photographs, slides, maps, and artifacts will be transferred to the SCIAA.

1.2.4 Assessing NRHP Eligibility

A primary goal of this investigation was to provide an accurate inventory of cultural resources within the project corridor and to provide sufficient data to determine if these sites are significant (i.e., eligible for the NRHP). Archaeological and architectural sites were evaluated based on the criteria for eligibility to the NRHP, as specified in the Department of Interior Regulations 36 CFR Part 60: *National Register of Historic Places*. According to 36 CFR Part 60.4 (Criteria for Evaluation), cultural resources (referred to as properties in the regulations) can be defined as significant if they:

A. Are associated with events that have made a significant contribution to the broad pattern of history;

B. Are associated with the lives of persons significant in the past;

C. Embody the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, possesses high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or are likely to yield, information important to history or prehistory.

A resource may be eligible under one or more of these criteria. Criteria A, B, and C are most frequently applied to historic buildings, structures, objects, districts, or non- archaeological sites (e.g., battlefields, natural features, designed landscapes, or cemeteries). The eligibility of archaeological sites is most frequently considered with respect to Criterion D. Also, a general guide of 50 years of age is employed to define "historic" in the NRHP evaluation process. That is, all resources greater than 50 years of age may be considered. However, more recent resources may be considered if they display "exceptional" significance (Sherfy and Luce n.d).

Following *National Register Bulletin*: *How to Apply the National Register Criteria for Evaluation* (Savage and Pope 1998), evaluation of any resource requires a two-fold process. First, the resource must be associated with an important historic context. If this association is demonstrated, the integrity of the resource must be evaluated to ensure that it conveys the significance of its context. The applications of both of these steps are discussed in more detail below.

Determining the association of a resource with a historic context involves five steps (Savage and Pope 1998). First, the resource must be associated with a particular facet of local, regional (state), or national history. Secondly, one must determine the significance of the identified historical facet/context with respect to the resource under evaluation. Any particular historical facet/context becomes significant for the development of the project area only if the project area contains resources that were constructed or gained their significance during that time. For example, an antebellum historic context would be significant for the development of a project area only if the project area contained buildings that were either built or gained their significance during the early nineteenth

century. Similarly, the use of contexts associated with the pre-contact Native American use of a region would require the presence of pre-contact archaeological sites within the survey universe.

The third step is to demonstrate the ability of a particular resource to illustrate the context. A resource should be a component of the locales and features created or used during the historical period in question. For example, early-nineteenth-century farmhouses, the ruins of African American slave settlements from the 1820s, and/or field systems associated with particular antebellum plantations in the region, would illustrate various aspects of the agricultural development of a region prior to the Civil War. Conversely, contemporary churches or road networks may have been used during this time period but do not reflect the agricultural practices suggested by the other kinds of resources.

The fourth step is to determine the specific association of a resource with aspects of the significant historic context. Savage and Pope (1998) define how one should consider a resource under each of the four criteria of significance. Under Criterion A, a resource must have existed at the time that a particular event or pattern of events occurred and activities associated with the event(s) must have occurred at the site. In addition, this association must be of a significant nature, not just a casual occurrence (Savage and Pope 1998). Under Criterion B, the resource must be associated with historically important individuals. Again, this association must relate to the period or events that convey historical significance to the individual, not just that this person was present at this locale (Savage and Pope 1998). Under Criterion C, a resource must possess physical features or traits that reflect a style, type, period, or method of construction; display high artistic value; or, represent the work of a master (an individual whose work can be distinguished from others and possesses recognizable greatness [Savage and Pope 1998]). Under Criterion D, a resource must possess sources of information that can address specific important research questions (Savage and Pope 1998). These questions must generate information that is important in reconstructing or interpreting the past. For archaeological sites, recoverable data must be able to address specific research questions.

After a resource is specifically associated with a significant historic context, one must determine which physical features of the resource are necessary to reflect its significance. One should consider the types of resources that may be associated with the context, how these resources represent the theme, and which aspects of integrity apply to the resource in question (Savage and Pope 1998). As in the example given above, a variety of resources may reflect the antebellum context (farm houses, ruins of slave settlements, field systems, etc.). One must demonstrate how these resources reflect the context. The farm houses represent the residences of the landowners who implemented the agricultural practices during the antebellum era. The slave settlements housed the workers who did the daily tasks necessary to plant, harvest, process, and market crops.

Once the above steps are completed and association with a historically significant context is demonstrated, one must consider the aspects of integrity applicable to a resource. Integrity is defined in seven aspects of a resource; one or more may be applicable depending on the nature of the resource under evaluation. These aspects are *location, design, setting, materials, workmanship, feeling,* and *association* (36 CFR 60.4; Savage and Pope 1998). If a resource does not possess integrity with respect

to these aspects, it cannot adequately reflect or represent its associated historically significant context. Therefore, it cannot be eligible for the NRHP. To be considered eligible under Criteria A and B, a resource must retain its essential physical characteristics that were present during the event(s) with which it is associated. Under Criterion C, a resource must retain enough of its physical characteristics to reflect the style, type, etc., or work of the artisan that it represents.

Typically, the most applicable criterion for evaluating archaeological properties is Criterion D. For a site to be considered eligible for the NRHP under Criterion D, it must possess information bearing on an important research question (Savage and Pope 1998:21). Important research questions commonly involve testing new or former hypotheses regarding important topics in the natural sciences and/or addressing important aspects of the cultural chronology of a region. This information must be evaluated within the framework of an historic context; meaning, the researcher must be able to address how the information contained within the resource is likely to affect current understanding of a particular time period.

If an archaeological resource is considered significant, it must also retain integrity. The aspects of integrity include location, design, setting, materials, workmanship, feeling, and association. For a property to be considered eligible for the NRHP, it must retain many of these aspects. The integrity of an archaeological site is commonly related to the aspects of location, design, materials, workmanship, and association. While disturbed sites can still be eligible if their undisturbed portions contain significant information potential, sites that have lost their stratigraphic context due to land alteration are commonly considered to have lost integrity of location (Savage and Pope 1998:23-49).

Archaeological resources were evaluated within local and regional prehistoric and historic contexts. These evaluations have been balanced though application of Glassow's attributes (Glassow 1977) to provide assessment of the resource's potential to address regional research issues. That is, a site's potential to contribute to local or regional research will determine that site's NRHP eligibility. A site's potential to provide data was evaluated explicitly as research potential beyond the present archaeological resources survey project. For example, every site with culturally or temporally diagnostic material has the potential to contribute to the reconstruction of settlement patterns through time. However, in many cases, this potential can be realized through recognition and detailed documentation at the survey level of investigation.

2.0 ENVIRONMENTAL AND CULTURAL OVERVIEW

2.1 ENVIRONMENTAL SETTING

The following discussion provides background information regarding the physical environment along the route of the proposed VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor and the surrounding region. Knowledge of local and regional environmental conditions and available resources assists cultural resource professionals in identifying potential resource zones and areas favorable for human settlement. Patterns of human settlement are often linked to specific environmental zones and availability of associated natural resources.

2.1.1 Physiography

The proposed transmission line corridor is located in the Fairfield, Newberry, Lexington and Richland Counties. The proposed corridor lies within the Sandhills region of South Carolina, along the Fall Line. The Fall Line separates the Piedmont and Coastal Plain. Kovacik and Winberry (1987:18) define the Sandhills as a narrow, discontinuous band of rolling hills, with moderate relief. In some stretches of the Sandhills, however, the relief can reach as great as 61 meters. The bedrock within the project area is primarily composed of coarse-grained granite, gneiss, and schist of Precambrian age (Lawrence 1978). Figures 2.1-2.3 provide views of the proposed corridor setting.

2.1.2 Climate and Soils

Today, the climate of this region is characterized by hot, humid summers and moderately cold, but short, winters. Average temperatures vary from 25-58° F(minimum-maximum) in December to 71-91° F in July; however, the average annual maximum temperature for the year is 102° F. Approximately 1.2 meters of precipitation, principally rain, falls in the region each year. Precipitation is most common in July to September (Lawrence 1978).

Today's temperature and rainfall ranges are quite close to those of the Middle to Late Archaic past. However, we would expect there to have been slightly warmer average temperatures; perhaps only on the order of a degree or two. But rainfall may have been less abundant or some degree, less seasonal.

Soils within the corridor are typical of the Upper Coastal Plain and are characterized by well drained sandy loams. Numerous soil types were encountered within the proposed transmission line's ROW and they were generally shallow with eroded topsoils. Generally, soils encountered within the proposed transmission line ROW were consistent with the Herndon, Pacolet, Cecil and Georgeville series. These series are characterized as being well drained loams, sandy loams, and silty loams.

2.1.3 Paleoenvironment

Regional research in palynology, historic biogeography, and coastal geomorphology permits a general reconstruction of the Holocene changes in the environment. Data from Florida, Georgia, North Carolina, and Virginia indicate that the Late Pleistocene was a time of transition from full glacial to Holocene environmental conditions (Watts 1980; Whitehead 1965, 1973). Upper Coastal Plain forests

Figure 2.1 General Environmental Profile of the Southern Leg of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, facing North.

Figure 2.2 General Environmental Profile of the Northern Leg of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, facing Northwest.

Figure 2.3 General Environmental Profile of the Central Portion of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, Showing Modern Dumping Activity, facing North.

of the Late Pleistocene (as reflected in the White Ponds record) were dominated by oak, hickory, beech, and ironwood (Watts 1980:192). This deciduous forest occurred in a cooler, moister climate than exists in the region today (Barry 1980; Braun 1950).

The general warming trend at the onset of the Holocene is reflected in sea level changes. Beginning approximately 17,000 years before present (BP), sea levels began to rise from the Late Pleistocene low of approximately 91 meters below modern sea level (Brooks et al. 1989). By 7,000 years BP, sea levels had risen dramatically to within 6.5 meters of present levels.

As drier and still warmer conditions became prevalent during the early Holocene, pines and other species suited to more xeric conditions increased. The southern forest at 7,000 years BP was beginning to resemble that of modern times (Watts 1980:194). The Early Holocene was also a period of extinction for many of the large Pleistocene mammals.

On a regional level, vegetation and climate have remained effectively static since the Early Holocene. Forests similar to the modern Southern Mixed Hardwood Forests (Quarterman and Keever 1962), with their associated modern faunal communities, were established by this time. These biota would remain in place until the modern cultural modifications of the landscape during the eighteenth and nineteenth centuries created the patchy woodland communities common today along river valleys.

2.2 CULTURAL OVERVIEW

The cultural history of North America generally is divided into three eras: Pre-Contact, Contact, and Post-Contact. The Pre-Contact era refers primarily to the Native American groups and cultures that were present for at least 10,000 to 12,000 years prior to the arrival of Europeans. The Contact era refers to the time of exploration and initial European settlement on the continent. The Post-Contact era refers to the time after the establishment of European settlements, when Native American populations usually were in rapid decline. Within these eras, finer temporal and cultural subdivisions have been defined to permit discussions of particular events and the lifeways of the peoples who inhabited North America at that time.

2.3 PRE-CONTACT ERA

In South Carolina, the Pre-Contact era is divided into four stages (after Willey and Phillips 1958). These include the Lithic, Archaic, Woodland, and Mississippian. Specific technologies and strategies for procuring resources define each of these stages, with approximate temporal limits also in place. Within each stage, with the exception of the Lithic stage, there are temporal periods that are defined on technological bases as well. A brief description of each stage follows, including discussions of the temporal periods within each stage. Readers are directed to Goodyear and Hanson (1989) for more detailed discussions of particular aspects of these stages and periods in South Carolina.

The Lithic Stage. The beginning of the human occupation of North America is unclear. For most of the twentieth century, archaeologists believed that humans arrived on the continent near the end of the last Pleistocene glaciation, termed the Wisconsinan in North America, a few centuries prior to 10,000 BC. The distinctive fluted projectile points and blade tool technology of the Paleoindians (described below) occurs throughout North America by this time. During the last few decades of the twentieth century, researchers began to encounter artifacts and deposits that predate the Paleoindian period at a number of sites in North and South America. To date, these sites are few in number. The most notable are Meadowcroft Rock Shelter in Pennsylvania (Adovasio et al. 1990; Carlisle and Adovasio 1982), Monte Verde in Chile (Dillehay 1989, 1997; Meltzer et al. 1997), Cactus Hill in Virginia (McAvoy and McAvoy 1997), and most recently, the Topper/Big Pine Tree site in Allendale County, South Carolina (Goodyear 1999). All of these sites contain artifacts in stratigraphic locales below Paleoindian deposits. Radiocarbon dates indicate occupations at the Meadowcroft and Topper/Big Pine Tree sites that are 10,000 to 20,000 years earlier than the earliest Paleoindian occupations. Cactus Hill produced evidence of a blade technology that predates Paleoindian sites by 2,000 to 3,000 years. Monte Verde produced radiocarbon dates comparable to those at North and South American Paleoindian sites, but reflects a very different lithic technology than that evidenced at Paleoindian sites. Similarly, the lithic artifacts associated with the other pre-Paleoindian deposits discovered to date do not display the blade technology so evident during the succeeding period. Unfortunately, the numbers of artifacts recovered from these sites are too small at present to determine if they reflect a single technology or multiple approaches to lithic tool manufacture. Additional research at these and other sites will be necessary to determine how they relate to the better-known sites of

the succeeding Paleoindian period, and how these early sites reflect the peopling of North America and the New World.

2.3.1 Paleoindian Period (10,000 – 8000 BC)

An identifiable human presence in the South Carolina began about 12,000 years ago with the movement of Paleoindian hunter-gatherers into the region. Initially, the Paleoindian period is marked by the presence of distinctive fluted projectile points and other tools manufactured on stone blades. Excavations at sites throughout North America have produced datable remains that indicate that these types of stone tools were in use by about 10,000 BC.

Goodyear et al. (1989) review the evidence for the Paleoindian occupation of South Carolina. Based on the distribution of the distinctive fluted spear points, they see the major sources of highly workable lithic raw materials as the principal determinant of Paleoindian site location, with a concentration of sites at the Fall Line possibly indicating a subsistence strategy of seasonal relocation between the Piedmont and Coastal Plain. The seasonal round of resource utilization within a tightly scheduled procurement system cannot be substantiated and neither can the exploitation of late Pleistocene megafauna. Although it is difficult to tell what was hunted by the shape of the projectile point, the general typological continuity between the Hardaway, Palmer, and Kirk horizons appears to suggest less specialized activity than the exploitation of megafauna.

The material culture of the Paleoindian period is dominated by fluted or semi-fluted projectile points, most commonly produced on high quality cryptocrystalline material. Although fluted points have been found in surface contexts across the South Carolina Piedmont including at the Nipper Creek site (Wetmore and Goodyear 1986:79-81), the Paleoindian (i.e., Clovis) period is relatively poorly represented (Goodyear et al. 1989). The Hardaway-Dalton complex includes semi-fluted/side-notched projectile points and a wide variety of formal scrapers (Coe 1964). It is best known from the Hardaway (type) site in Stanley County, North Carolina (Coe 1964), but other excavations have also yielded Hardaway and Dalton material (e.g., Claggett and Cable 1982). The following Early Archaic-period Palmer phase retains many of the same formal tool types, while the Palmer projectile point is a side-notched variety generally lacking basal thinning or fluting (Coe 1964).

In terms of settlement, there appears to have been a dramatic increase in site frequency from Clovis to Hardaway-Dalton. Hardaway sites are present in a wide variety of environmental zones. If O'Steen's (1983) model of Transitional period settlement in Georgia Piedmont can be applied to the South Carolina Piedmont, the major sites would be expected near large rivers, particularly around areas of shoals or narrows.

2.3.2 Archaic Period (8,000 - 500 BC)

The Early Archaic Period (8,000 - 6,000 BC). The Early Archaic corresponds to the adaptation of native groups to Holocene conditions. The environment in central South Carolina during this

period was still colder and moister than at present, and an oak-hickory forest was establishing itself near the Fall Line (Watts 1970, 1980; Whitehead 1965, 1973). The megafauna of the Pleistocene disappeared, and more typical woodland flora and fauna were established. The Early Archaic adaptation on the Fall Line of South Carolina is not clear; however, several sites in the region have produced Early Archaic remains (Goodyear et al. 1989; Michie 1978; Wetmore and Goodyear 1986:17-19). Early Archaic finds in the region typically are side- or corner-notched projectile points (e.g., Palmer and Kirk), determined to be Early Archaic through excavation of sites in other areas of the Southeast (Claggett and Cable 1982; Coe 1964). Several large Early Archaic sites have been partially excavated along the Broad-Saluda-Congaree drainages to the west of Fort Jackson, including the Taylor Site (38LX1) (Michie 1971) and the Nipper Creek Site (38RD18) (Drucker et al. 1996; Drucker and Davis 1998; Wetmore 1987; Wetmore and Goodyear 1986).

Early Archaic sites generally are small, suggesting a high degree of mobility. Diagnostic projectile points have been recovered from all portions of the lower Piedmont and Upper Coastal Plain, suggesting a shift from the riverine emphasis of the earlier Paleoindian period (Goodyear et al. 1989:38; Wetmore and Goodyear 1986:18).

Anderson and Hanson (1988) propose a model for Early Archaic subsistence/settlement on the South Atlantic Slope. This model suggests the implementation of high residential mobility throughout most of a season, with aggregation in the winter when resources are less widely distributed within the region. Further, population aggregates are associated with specific drainages. Annual population movements include use of the Piedmont and upper Coastal Plain within each drainage; Sandhills areas presumably were visited in the fall, probably due to the presence of dense oak masts and concentrations of mast-consuming ungulates (i.e., deer) (cf. Sassaman et al. 1990:50-52). Further, Anderson and Hanson (1988:271) suggest the presence of "macrobands" associated with the larger drainages that cross the region. Interaction between these larger aggregates permitted the flow of extra-local raw materials, information, and mates between the groups occupying each drainage. Presumably, the aggregation of populations within drainages near the Fall Line in the late fall and early winter, and movements of populations between drainages at the same time would contribute to the diversity of lithic raw materials recovered from Early Archaic sites in the Fall Line region.

In contrast, O'Steen's (1983) model of Early Archaic settlement suggests fairly restricted occupation during this period in the Oconee Valley of the Georgia Piedmont. Recurring occupation of base camps within the valley, at locales that provided access to the greatest density and diversity of resources, was suggested, with lithic exchange networks that extended across territorial boundaries of particular groups.

Middle Archaic Period (6,000 - 2,000 BC). The trends initiated in the Early Archaic (i.e., increased population and adaptation to local environments) continued through the Middle Archaic period. Climatically, the study area was still warming, and an oak-hickory forest dominated the region until circa 2000 BC, when pines became more prevalent (Watts 1970, 1980). Stemmed projectile

points (e.g., Stanly, Morrow Mountain, Guilford) and ground stone artifacts characterize this period (Blanton 1983). On the Piedmont to the north and west, site densities apparently increased through the period, suggesting a more intensive implementation of foraging strategies; no specific locales appear to be favored for occupation (Blanton and Sassaman 1989:59-60). On the Coastal Plain, Middle Archaic sites occur with less frequency but show evidence of more intensive habitation and large-scale tool production. This suggests an increased "patchiness" in resources on the Coastal Plain, compared to earlier periods or the contemporary Piedmont (Sassaman et al. 1990:10). Thus, a different pattern of settlement is suggested for this period in the lower portions of South Carolina.

Sandhills Middle Archaic sites appear to relate more to the Coastal Plain settlement pattern than the pattern evidenced on the Piedmont. Anderson's (1979:236) excavation of Middle Archaic components at 38LX5 and 38LX64, on the western side of the Congaree River, suggest use of river flood plain locales (e.g., 38LX64) as long term residential sites, similar to logistical base camps, and use of nearby upland settings (e.g., 38LX5) as more specialized resource extraction loci. However, extensive examinations of interriverine settings in the region, like those at Fort Jackson, have not been undertaken in the immediate area. The distribution and nature of Middle Archaic sites at the Department of Energy's Savannah River Site, on the Savannah River immediately below Augusta, Georgia, suggest a pattern similar to that described for the Piedmont (Sassaman et al. 1990:310).

Data from the original excavations of the Middle Archaic component at the Nipper Creek site strongly indicated that the site comprised numerous short-term occupations (Wetmore and Goodyear 1986:82-83). Based on their later work at the site, closer to the Broad River, Drucker and Davis (1998:76) argue that the Middle Archaic occupants employed a very flexible subsistence-settlement strategy that featured continual foraging from one resource range to the next (see also Claggett and Cable 1982). This strategy also included the use of an expedient stone tool technology based upon the exploitation of locally available lithic raw materials.

Late Archaic Period (2,000 - 500 BC). The Late Archaic period apparently relates to a time of population expansion and increased local adaptations (Caldwell 1958). It is during this time that the first pottery appears on the South Carolina coast and in the Fall Line region. This pottery is the sand tempered or untempered Thom's Creek series and the fiber tempered Stallings series; both are decorated by punctation, incising, finger pinching, and, for Thom's Creek, possibly simple stamping and dentate stamping. Large, stemmed bifaces (e.g., Savannah River) are the most common lithic artifacts in the earlier preceramic Late Archaic assemblages. Smaller, stemmed points appear in association with the ceramic wares, apparently representing a transition between the ceramic Late Archaic and subsequent Early Woodland cultural manifestations of the region.

Distribution of Late Archaic sites throughout the southeastern Atlantic seaboard suggests that intensive exploitation of specific aquatic resources was common throughout the period. Large sites, presumably representing long periods of occupation by a large population aggregate,

occur along the major drainages and the coastal estuaries. Emphasis on anadromous fishes at the Fall Line and on the Piedmont and shellfish along the coast has been suggested by several researchers (Claggett and Cable 1982:40; Taylor and Smith 1978) to explain the presence of these large sites. However, the distinctive large, stemmed projectile points generally associated with Late Archaic occupations have been recovered from sites in almost all environmental settings from the mountains to the coast throughout South Carolina (Wetmore and Goodyear 1986:21). Thus, Late Archaic sites can be expected throughout the interriverine uplands of the Sandhills, the lower Piedmont, and the upper Coastal Plain.

Sassaman et al. (1990:312-314) propose a model for Late Archaic settlement on the Savannah River Site that includes large population aggregations in the river valley during the spring and summer, with a dispersal of smaller family groups into tributary drainages during the fall and winter of each year. This would result in the development of large, dense sites with very diverse artifact assemblages occurring in the river flood plain, and smaller and less diverse sites occurring along smaller drainages and in the interriverine areas. Anderson's (1979:236-237) excavations at four sites in the Congaree Valley in Lexington County tend to support such a model, with two sites located in upland settings adjacent to the flood plain containing remains suggestive of limited activity animal processing, and two sites on the flood plain containing evidence of intensive occupation suggestive of long term residence and a wide range of activities. Drucker and Davis's (1998:76-77) excavations at the Nipper Creek site, however, suggest a somewhat different settlement-subsistence strategy. They argue that unlike the Congaree River sites, the Late Archaic occupation of the Broad River levee involved short-term logistical foraging of upland and floodplain resources rather than extensive long-term habitation.

2.3.3 Woodland Period (500 BC – AD 1000)

Early Woodland Period (500 BC - AD 200). Some researchers choose to consider Thom's Creek an Early Woodland manifestation. Because of the close association in some areas between Thom's Creek and fiber-tempered ceramics, here Thom's Creek is considered Ceramic Late Archaic. The first Woodland manifestations in the region are characterized by a significant increase in stamp decorated pottery. Following Espenshade and Brockington (1989), definitive markers of the Early Woodland are considered to be Deptford Check Stamped (linear and bold), Deptford Simple Stamped (including possible Refuge Simple Stamped), and coarse tempered, fabric impressed pottery. In the Early Woodland, the region apparently represented an area of interaction between widespread ceramic traditions, with the paddle stamped tradition dominant to the south, and the fabric impressed and cord marked tradition dominant to the north and west (Blanton et al. 1986; Caldwell 1958; Espenshade 1986; Espenshade and Brockington 1989; Ward 1983).

The subsistence and settlement pattern of the Early Woodland period suggests population expansion, and the movement of groups into areas used less intensively in earlier periods. Hanson (1982) suggest that this dispersal reflects a collapse of a previously stable resource base (e.g., drowned estuaries on the coast [Trinkley 1989:78]) and the attempt of Early Woodland populations to replace a focused subsistence strategy with a more diffuse one (after

Cleland 1976). Anderson and Joseph (1988:218) note a similar diffusion of population and reduced regional interaction during the Early Woodland period in the Middle Savannah River Valley of South Carolina as well. Similar dispersals are noted for the Savannah River Site, with an occupational shift from the flood plains to the uplands along the many tributaries of the Savannah River (Sassaman et al. 1990:315). Anderson (1979:237) suggests a general shift away from the Congaree flood plain as well. Presumably, single family residences were established in the upland locales that were inhabited throughout the year. Additional resources were procured through exchange with neighbors or collected from specialized sites scattered throughout the immediate area surrounding a household.

Thus, Early Woodland sites most common in the region generally consist of small ceramic and lithic scatters in a variety of environmental zones. Some will represent residential locations of single family units, while other sites will represent resource extraction loci. Lower artifact frequencies and diversity, as well as reduced site size could be expected at the resource extraction sites.

Middle and Late Woodland Periods (AD 200 - 1000). The typological manifestations of the Middle and Late Woodland periods in the region are somewhat unclear. The check stamped tradition of the Early Woodland Deptford series continues through most of the Middle Woodland, and check stamping reappears late in the Late Woodland period. Cord marked and fabric impressed ceramics continue to be produced through the Middle and Late Woodland periods, as do simple stamped wares. There is no single decorative mode that can be associated with this period, and recent research has only begun to sort out the confusion (Anderson et al. 1982; Blanton et al. 1986; Trinkley 1983).

Middle and Late Woodland settlement patterns appear to continue the diffused distributions noted for the Early Woodland (Trinkley 1989:83-84). Interior Coastal Plain sites of the period tend to occur adjacent to the large swampy flood plains of the many rivers crossing the Coastal Plain, with numerous small scatters of Middle/Late Woodland artifacts occurring on the interriverine uplands.

2.3.4 Mississippian Period (AD 1000 - 1500)

Prehistoric Mississippian societies represent the most complex prehistoric cultural development in the southern United States. The diagnostic complicated stamped ceramics and small triangular projectile points of this period mark the transition of groups in the region into a complex system of social organization which lasted until first European contact. In most areas of the Southeast, the Mississippian period is characterized by an emphasis on agriculture and by the development of complex public works and ceremonial centers occupied by a highly stratified society. Mounds are known on the Wateree River to the east (Ferguson 1971, 1975) and on the Savannah to the west (Taylor and Smith 1978), but no large mounds have been identified in the Columbia area to date.

Mississippian groups apparently were aligned along major drainages (i.e., those with extensive flood plains) (Anderson 1989:114). A wide range of site types has been identified for Piedmont Mississippian occupations throughout South Carolina, North Carolina, and Georgia. Larger villages tend to be associated with specific mound sites. Smaller habitation sites are scattered along the surrounding drainages, to the extent that single family compounds may be present on secondary drainages with adequate flood plains to support the agricultural production of foodstuffs (Ferguson and Green 1984; Poplin 1990). Ferguson and Green (1984) also note that Mississippian centers generally display a symmetric distribution above and below the Fall Line, with few large sites in the immediate location of the distinctive rapids of the local rivers. Thus, major Mississippian sites tend to be located along the major drainages of South Carolina that possess extensive flood plains; however, they occur either on the lower Piedmont (above the Fall Line) *or* on the upper Coastal Plain (below the Fall Line) rather than at the transition between these two major physiographic regions of the state.

One of the principal Mississippian centers of South Carolina is located to the east of Columbia on the Wateree River. Mulberry Mound group, presumably representing the protohistoric town of Cofitachequi, is considered to represent the regional "center" of Mississippian settlement throughout central South Carolina. Anderson (1989:119) suggests that an extensive buffer existed between the province associated with Cofitachequi, and the neighboring province of Ocute, presumably centered on the Oconee River in Georgia. Much of the Savannah River Valley appears to have been abandoned during the later Pre-Contact and Contact periods. Extensive research has not been conducted in the drainages between the Savannah and Wateree, but large Mississippian settlements have not been positively identified in these drainages to date. Thus, the Wateree River, east of Columbia, may represent the extreme margin of Mississippian settlement associated with Cofitachequi.

In addition to the large central mound villages, many small scatters of Mississippian artifacts are found in diverse environmental settings throughout the surrounding region. These sites probably represent resource extraction loci, since an amalgam of agricultural produce and hunted and gathered remains provided subsistence for Mississippian groups throughout the Southeast (Smith 1975). As an example, Goodyear (1976:11-12) notes extensive Mississippian sites along the Congaree River below Columbia. These sites are interpreted as base camps located near prime agricultural lands, from which interriverine locales were visited to collect resources not available on the flood plain.

2.4 THE CONTACT AND POST-CONTACT ERAS

The Contact era begins in South Carolina with the first Spanish explorations into the region in the 1520s.Native American groups encountered by the European explorers and settlers probably lived in a manner quite similar to the late Pre-Contact Mississippian groups identified in archaeological sites throughout the Southeast. Indeed, the highly structured society of Cofitachequi, formerly located in central South Carolina and visited by De Soto in 1540 and Pardo in 1565, is an excellent example of the Mississippian social organizations present throughout southeastern North America during the late Pre-Contact era (Anderson 1985, 1994).

The small initial European forays that encountered these Mississippian groups, however, marked the beginning of a massive colonizing project involving three of Europe's most powerful kingdoms. By the time the English colony was founded at Charles Towne in A.D. 1670, the French had already established and lost a colony in the region, and the Spanish were successfully managing an extensive network of missions throughout northern Florida and along the Georgia coast (Crane 2004; DePratter and South 1990; McEwan 1993; Worth 1995). During the late sixteenth and seventeenth centuries, disease, warfare, and the trade in Indian slaves all contributed to the rapid decline of the regional Indian populations (Dobyns 1983; Gallay 2002; Ramenofsky 1982; Smith 1987). According to one researcher's estimates, between the years 1685 and 1715, the Indian population in the Southeast declined from 199,400 to 90,100, a reduction of nearly 55 percent (Wood 1989).

The dramatic effects of European diseases upon native groups across North America are well known (e.g., Dobyns 1983; Smith 1987). When Europeans came to the New World, they brought with them infectious diseases like smallpox, measles, yellow fever, typhus, whooping cough, influenza and plague. Because Native North American populations had never been exposed to these diseases, outbreaks of sickness grew to epidemics that spread quickly throughout villages and towns killing many. The seventeenth century witnessed many of these so-called "virgin soil epidemics," the results of which were large-scale regional depopulation; social, economic, and political instability; and mass population movements.

The economic and strategic ambitions associated with empire building naturally generated strife among the fragile colonial beachheads of England, Spain, and France (Gallay 2002). England and France pursued essentially the same colonial strategy in the Southeast – one founded on the expansionist principles of mercantilism. As is well known, the Spanish expressed relatively little interest in extracting economic resources from their southeastern colonies; instead, as early as 1565, King Phillip II of Spain declared that the dual missions of Spanish colonies in the Southeast were to protect Caribbean shipping lanes and to propagate the Catholic faith among southeastern Indian groups (Oatis 2004). Regardless of similarities and differences in colonial strategy, it was a fait accompli that the colonies of the three kingdoms would not co-exist peacefully in the Southeast. Spain and France were, after all, eternal rivals of England, and violent conflicts among the three colonial "superpowers" (or more often among their Indian allies) punctuated this period in the Southeast.

Whether they desired the position or not, by virtue of geography South Carolina would be the English colonial vanguard against any southeastern invasion from Spanish or French forces. It did not take long before South Carolina would be called to fulfill this role, for immediately after the founding of Charles Town, the Spanish began plotting attacks (Crane 2004). In August and again in December 1686, the Spanish finally acted on their plans and mounted attacks that destroyed Stuart Town, a settlement located at Port Royal south of Charles Town (Gallay 2002). This attack so close to their main settlement doubtless gave the South Carolina proprietors and their appointed officials good reason to implement a proactive defensive

strategy that featured the use of allied Indian groups to create a "buffer zone" that would protect the colony from the Spanish and French and their Indian allies.

The buffer zone that was to protect South Carolina needed to be strongest to the south in order to check raids by the Spanish and their Indian allies. The Savannah River was the most appropriate location for a border because it was a very defensible obstacle as well as a major route of ingress into the interior Southeast (Gallay 2002). South Carolina obviously did not have the manpower construct or man garrisons along the river, thus they had to rely on Indian allies to guard their frontiers. Beginning in the 1680s, colonial officials set about encouraging allied Indian groups to settle along the Savannah River with the construction of a trading post at Savannah Town. By the turn of the eighteenth century, the trading post had accomplished its mission by attracting numerous allied groups including the Westo, Savannah, Yamasee, Apalachicola, Yuchi, and Chickasaw. It is clear that the South Carolina architects of this strategy never intended for the buffer zone of Indian allies to be a passive deterrent to their European rivals. From their earliest overtures to Indian groups, South Carolina officials intended on creating an armed militia of Indians that could be persuaded to promote the colony's interests internally and abroad.

The use of Indian allies was a potent tool in promoting South Carolina's interests against their European rivals. This strategy was affected on two scales. On one scale were small yet frequent slave raids consisting of parties of two to ten men that continually harangued enemy-allied Indians groups like the Timucua, Apalachee, Guale, Arkansas, and Tunica, along South Carolina's borders (Gallay 2002). The first 15 years of the eighteenth century also witnessed the use of Indian allies on a much larger scale – in major colonist-led Indian military forays that cumulatively resulted in the deaths and enslavement of thousands Indians allied with the Spanish and French. These forays included Colonel James Moore's invasions of Spanish Florida as part of Queen Anne's War, first against St. Augustine in 1702, and later against the Apalachee missions in 1704. These operations, which resulted in the destruction of the Spanish-allied Apalachee Indians, included 370 Yamasee Indians and 1,000 Muskogee-speaking Indians respectively (Crane 2004; Gallay 2002; Oatis 2004). A third major assault against the Spanish settlement of Pensacola launched in 1707 involved a few hundred Muskogean warriors. Against French colonial interests, South Carolina traders and allied Indians conducted an attack on Tomeh and Mobile Indians around the colony of Mobile in 1709 and two attacks on French-allied Choctaw towns in 1705 and 1711. Period accounts reported that the attacks on the Choctaw involved English-allied Chickasaw and Muskogee forces numbering between 2,000 and 4,000.

During the Contact era, the success or failure of any strategy enacted by the European colonial powers was ultimately tied to successful trade with Indian groups. Sustained exchange relations between southeastern Indian groups and Europeans had existed for nearly a century when Charleston was founded in 1670. Indeed, Smith (1987) and Waselkov (1989) have garnered ethnohistorical and archaeological evidence to demonstrate that small-scale yet substantial trade in deerskins existed between Spanish Florida and interior Indian groups during the late sixteenth and seventeenth centuries. The founding of English colonies in the Southeast in the 1600s, however, brought major changes to the existing exchange system. Unlike Spanish colonies, the

economic structures of South Carolina and Virginia were geared toward generating large profits by producing mass quantities of goods and resources for export. Along with tobacco and rice plantations, Indian trade figured prominently in the economic structure of southeastern English colonies, much more so in South Carolina than Virginia (Martin 1994). It was the scale of Indian trade, needed to satisfy the labor and capital demands of both the local plantation economy and the Atlantic trade economy, that marked the departure of the English Contact period trading system from the previous Spanish system (Ramsey 2003). The sheer scale of slavery and deer hunting in this system produced profound sociopolitical disruptions that were variably felt by every Indian group across the Southeast.

Historians William Ramsey (2001, 2003) and Alan Gallay (2002) have done much to quantify the scale of Indian slavery by consulting the colonial records of South Carolina. Ramsey (2001) sketched the historic demography of Indian slavery in South Carolina during the period. Surveying period wills and census records, he found that Indian slaves comprised only 6 percent of all slaves during the 1680s and 1690s, but that this number rose to 10 percent after Colonel James Moore's raids of 1702 and 1704. By the outbreak of the Yamasee War in 1715, approximately 25 percent of all slaves held by South Carolinians were Indians, a total population of 1,400 individuals. Gallay's research (2002) furthered the argument that most slaves sold in Charleston markets were later traded to other colonies. He argued that the population estimated by Ramsey was but a small fraction of the total number of slaves taken during this period. Based on transport records following major military campaigns (described above) and trader accounts, Gallay (2002) estimated the total number of Indian slaves that were taken between 1670 and 1715 to be between 24,000 and 51,000 individuals.

The other commodity that circulated within the flourishing colonial trading system was deerskins. Virginians began trading in deerskins with nearby tribes shortly after the colony's founding in 1607, but trade with Indian groups beyond the Carolina piedmont was at this time insignificant, possibly because the routes to more distant groups were controlled by "middlemen" like the Occaneechees, Catawba, and Tuscarora (Martin 1994). With the founding of South Carolina in 1670, the dynamics of this fledgling trading system changed dramatically. First, the scale of the trade increased greatly with the influx of dozens of new traders all with aspirations of amassing great riches. Second, the geographic position of Charleston allowed these South Carolina traders to trade directly with interior groups using new routes that did not pass through the territory of the piedmont middlemen. Lastly, the establishment of trade with South Carolina added an alternative source of trade for southeastern Indian groups. This led to competition for the Indian trade not only among the European colonial powers, but also (and more intensely) between South Carolina and Virginia (Gallay 2002; Martin 1994).

On Good Friday, April 15, 1715, the protective buffer surrounding South Carolina was ruptured and chaos invaded the lives of European colonists living in and around Charleston. The Yamasee War began that day when a number of South Carolinian trade officials were murdered in the Yamasee town of Pocotaligo. The murders took South Carolinians completely by surprise, as the Yamasee were thought to be one of the colony's closest allies. Indeed, the murdered

Englishmen had only been sent to Pocotaligo in order to arrange talks with another Indian group, the Ochese Muskogeans, who were rumored to be planning attacks against South Carolina traders and settlers (Crane 2004). These initial murders were quickly followed by major Yamasee attacks on plantations around Port Royal south of Charleston. In these attacks, the Yamasee managed to kill over 100 colonists and set the rest of the settlement's population to flight. In the following weeks, news began to filter into Charleston that most of the English traders in the towns of the Tallapoosa, Abiehka, Alabama, Ochese, Coweta, Choctaw, Chicksaw, Catawba, and Cherokee had either been killed or chased off (Oatis 2004). Adding to the fears of a pan-Indian assault, news emerged that the Catawba and a small group of Cherokee had made raids on plantations north of Charleston and even managed to capture a South Carolina militia garrison (Crane 2004). Facing this apparent "invasion," colonists across South Carolina fled to Charleston, where the effects of overcrowding, fear, and tension, exacerbated by the summer heat, took its toll on the physical and mental health of many residents (Oatis 2004).

Traditionally, historians have written about the Yamasee War as a united Indian revolt against the abuses of English traders, but recent attention has turned to exploring the different motivations and strategies of the Indian groups who participated in the attacks (e.g., Gallay 2002; Oatis 2004; Ramsey 2003). To various extents, these authors agree that, while some of the Indian participants were in collusion, the Yamasee War was not a pan-Indian conspiracy that was carried out with the aid of a "master plan" (Oatis 2004). Instead, they hold that each group acted according to their own strategy and toward their own "diplomatic" goals. Abuse by traders, mounting debts, and the fear of enslavement were important factors in some groups' decision to join the war against South Carolina, but these three "classic" causes were as far from universal as the actions of the participating groups. The classic causes apply most to the Yamasee, but even their decision to attack South Carolina settlements was also likely influenced by the encroachment of Europeans on their "treaty-protected" lands as well as a breakdown in diplomacy with colonial officials (Gallay 2002; Ramsey 2003).

South Carolina's military response to the Yamasee and Catawba raids was swift. Only a week after the murders at Pocotaligo, the governor of South Carolina personally led militia forces to decisive victories against the Yamasee towns forcing them to retreat southward to the Altamaha River (Oatis 2004). Also, days after the assaults north of Charleston, South Carolina, militia Captain George Chicken managed to rout the invading Catawba force in an ambush that came to be known as the "Battle of the Ponds" (Crane 2004). While these were the only major military engagements, the Yamasee War officially carried on for almost two years (along with the anxiety and fear felt by the colonists in Charleston) until a peace with the Lower Creeks was brokered in 1717. The end result for the study area was that by 1718, the Carolina militia had annihilated or driven off most of the Native groups who had inhabited the coastal areas of South Carolina.

The years following the Yamasee War (ca. A.D. 1718-1780) were generally a much more settled time in which Indian groups and colonists were beginning to adjust to the disruptions and chaos of the previous 45 years. While Indian groups continued to suffer from epidemics during

the period, increased resistance to diseases and the abatement of Indian slavery significantly reduced the rate of population loss affecting Indian towns. The post-war years also featured the gradual cessation of frenetic population movements across the landscape as Indian populations consolidated and settled into particular areas such as the Chattahoochee River valley, the Coosa and Tallapoosa River valleys, the Catawba and Wateree River valleys, and the Hiwassee and Little Tennessee River valleys. As for the Europeans, South Carolina officials renewed diplomacy and trade with Indian groups amid a landscape inhabited by their reinvigorated European rivals. South Carolina's diplomatic strategies included numerous unsuccessful attempts to consolidate political power among Indian groups. Their strategies also included encouraging Indian conflicts that benefited England's imperial struggle against Spain and France (e.g., Creek vs. Spanish-allied Yamasee, Cherokee vs. French-allied Illinois) while discouraging conflicts that involved English-allied groups (e.g., Creek vs. Cherokee). Rather than settling down, the deerskin trade experienced a significant expansion during the post-war years of the English contact era.

2.4.1 The Colonial Period

The Carolina coast was first permanently settled by Europeans in 1670. The earlier Spanish attempts to settle at San Miguel de Gualdape (1526) to the north and at Santa Elena (1566–1587) to the south apparently had limited impact on the study area. The French attempt at Port Royal (1562) also had little impact. The establishment of Charles Towne by the British in 1670, however, sparked a period of intensive fur and slave trade with the Indians of the region, and provided a base from which settlers quickly spread up the Cooper River and its tributaries. Charles Towne initially was settled under the proprietary system; not until 1719 did South Carolina become a royal colony.

The new colony was organized with the parish as the local unit of government. The church building itself was to serve both religious and political purposes. As Gregorie (1961:5) explains, "The parish church was to be the center for the administration of some local government in each parish, for at that time there was not a courthouse in the province, not even in Charleston."

In 1720, there were 107 white taxpayers and 2,027 slaves in St. James Goose Creek Parish, which contains much of the study area (Petty 1975:24). Four parishes had larger populations of taxpayers, but only one, St. Andrews, had more slaves. Most of the slaves were involved in the production of rice. As early as 1720, rice accounted for half of the colony's profits, and the importance of rice grew over the next 140 years. It was complemented by the introduction of indigo as a cash crop in 1740 (Pinckney 1976). While rice production was restricted to the river marshes, indigo grew best in well-drained soils.

By the 1740s, the population of South Carolina had expanded dramatically. More areas were settled, with plantations spreading throughout much of the Lowcountry. Large-scale agricultural production was achieved through the operation of plantations that employed slave labor. Slaves were brought from West Africa to perform the many tasks necessary to produce cash crops on the plantations. Slave labor was especially essential to rice production, with

knowledgeable slaves (i.e., those taken from African rice-producing societies) conducting and directing most of the activities associated with rice growing and harvesting (Joyner 1984). This system of production would continue until the end of the Civil War, which resulted in the abolition of slavery throughout the United States.

Most of the early settlements and plantations focused on the Cooper, Wando, Ashley, and Stono rivers and Goose Creek. These waters provided the best opportunities for profitable agricultural production (i.e., rice cultivation) as well as the best avenues of transportation to Charleston or other settlements in the region (South and Hartley 1985). Evidence of the many plantations along these rivers remains today primarily as archaeological sites, although some plantations, such as Rice Hope near Moncks Corner, are still occupied. Interior lands such as those of the study area often served as pasture lands for cattle and swine, or as a source of timber and game for plantation populations.

During the Revolutionary War, coastal South Carolina saw little action between the failed British attempt to take Charleston in 1776 and their successful occupation of the city in 1780. The British left Charleston in 1782. During the British occupation of Charleston, however, a number of plantations in St. James Goose Creek Parish were visited by British troops. Produce, stock, and slaves were removed from many plantations, often by force of arms. A number of landowners also had buildings and facilities destroyed by the British occupation forces; the Middleton plantation at Crowfield and the Moultrie estate at Otranto are two notable examples (see Elliott 1987:44 concerning losses at Crowfield). One of the principal battles of the war in the South occurred to the north of the study area at Eutaw Springs, near Eutawville. Here the American forces of General Nathanael Greene stopped a British force moving to reinforce and relieve the besieged army of Lord Cornwallis at Yorktown, Virginia. Failure to prevent this reinforcement may have prolonged the war by allowing Cornwallis to escape capture.

An important outcome of the Revolutionary War was the removal of royal trade protection, which caused a drastic reduction in rice profitability. As a result, many planters in the study area began to supplement their rice crops with cotton agriculture. Unfortunately, soils in the study area were not as productive for cotton as those of the Sea Islands.

2.4.2 Antebellum Period

The emergence of cotton as a market crop at the turn of the nineteenth century encouraged the widespread use of slaves throughout the regional plantations and farms. While the county's largest slaveholders lived on plantations along the Wateree and Congaree Rivers, most of Fairfield, Richland, and Lexington slave owners owned fewer than five slaves. In 1790, a third of Richland County's population was black; however, within the next ten years, a black majority emerged as the new cotton culture expanded. Measures to control the growing population of enslaved and free blacks in Richland County increased in the years prior to the Civil War.

Although the region relied heavily on cotton production at the onset of the antebellum period, the 1860 agricultural census reveals that production of cotton decreased in the years

leading up to the Civil War. While the production of vegetables, such as corn, sweet potatoes, and beans remained high, the region produced less than ten thousand bales of ginned cotton in 1860, nearly fifteen hundred bales less then the 1850 crop (Martin et al. 2002:18).

While eighteenth-century transportation in the midland areas of South Carolina relied on rivers and creeks, the development of a railroad network in the nineteenth century linked Columbia to the rest of the state. Chartered in 1833, the Columbia Railroad Company sought to establish a line to connect Branchville to Columbia, with the first trains reaching the capital city in 1842. In 1852, the Charlotte and South Carolina Railroad was complete, while workers finished the Greenville and Columbia Railroad the following year. By 1860, the network of Columbia's three railroads spread across the state, linking the capital city to the port city of Charleston and the Piedmont cities of Greenville, Charlotte, Spartanburg, and Anderson (Martin et al. 2002:19).

On the eve of the Civil War, Richland County had become a powerful force in the region due largely to its central geographic position, prominence as the home of the state capital, and the expansion of railroad transportation. By the fall of 1860, the air of excitement for growth and change was replaced by the high drama of political rhetoric and secession.

2.4.3 The Civil War to 1900

The Civil War and Reconstruction era transformed Richland County's economic, social, and cultural landscapes in monumental ways. The war left behind devastated crops, livestock, and farms, while tenant farming and sharecropping replaced the culture of slavery. While the county experienced a decrease in agricultural productivity and economic expansion, the post-Civil War period also introduced reform and improvement in transportation and education.

During Reconstruction, agriculture in the rural areas of the midlands had to adjust to changes in labor and the poor conditions of crops following the war. Cotton production fell dramatically and the livestock population decreased. The cultivation of corn and sweet potatoes, however, remained high.

While the Civil War disrupted rail traffic throughout the region, the late nineteenth century proved to be a transformative time for the county's railroads. In 1883, a new depot opened in Columbia. After a merger with a rail line that extended to Augusta, Georgia, the Charlotte and South Carolina Railroad became the Charlotte, Columbia, and Augusta Railroad. During the last decade of the nineteenth century, three lines running through Columbia (the Charlotte, Columbia, and Augusta, the Columbia, Greenville, and Richmond, and the Spartanburg, Union, and Columbia became part of the Richmond and Danville system, which would later become Southern Railways (Martin et al. 2002:28). The renewed railroad activity transformed Columbia into a major transportation hub, with small communities developing around the rail corridors.

2.4.4 Twentieth Century

During the onset of the twentieth century the area embraced railroads, textiles, and a variety of commercial ventures. In May 1917, General Douglas MacArthur announced that a major training center for the United States Army would be built just east of Columbia. Encompassing thousands of acres, the camp was officially named Camp Jackson in honor of Andrew Jackson. Construction was completed by January 1918 and renamed Fort Jackson on the eve of World War II (Martin et al 2002:31).

During the Great Depression, the crash of the stock market had a devastating effect on the surrounding counties. Many farmers lost their land and unemployment rates increased thirty percent. Banks failed, cotton prices plummeted, and businesses closed. President Franklin Roosevelt's New Deal helped put hundreds of county residents to work building parks and roads, making improvements to buildings, and preserving historical documents and oral histories (Martin et al. 2002:32-34).

After World War II, the midland areas of South Carolina underwent significant changes. The once rural landscape transformed into widespread urban developments. Many rural residents abandoned farming for more lucrative opportunities in larger cities. By 1950, the region became dependent on Fort Jackson, the state government, and the University of South Carolina to pump millions of dollars into the local economy. These three enterprises attracted and fostered many related activities in the area and continue to influence the growth and prosperity of the region (Edgar 2006:801).

3.0 RESULTS AND RECOMMENDATIONS

3.1 RESULTS OF THE BACKGROUND RESEARCH

Background research focused on all archaeological resources located within a .5-mile radius of the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line ROW corridor. Based on results of the background research conducted at SCIAA, in Columbia, South Carolina, Brockington has concluded that no eligible or listed NRHP sites will be directly or indirectly impacted by development of the proposed transmission line corridor. A search of previously recorded resources within the area lists 28 previously identified archaeological sites within this .5-mile radius (Figure 3.1). The accompanying Table 3.1 lists these sites as well as their respective NRHP listings.

Table 3.1 Previously Recorded Archaeological Sites Near the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, Fairfield, Lexington, Newberry and Richland Counties, South Carolina

Site Number	Site Description	Cultural Affiliation	NRHP Eligibility
38FA0030	lithic scatter	Middle Archaic	Not Determined
38FA0039	lithic scatter	Middle Archaic	Not Determined
38FA0040	lithic scatter	Middle Archaic	Not Determined
38FA0045	lithic scatter	Middle Archaic	Not Determined
38FA0334	prehistoric artifact scatter	Late Archaic/Early Woodland	Probably Not Eligible
38FA0335	prehistoric artifact scatter	Late Archaic/Unknown Prehistoric	Probably Not Eligible
38FA0336	prehistoric lithic scatter/Pearson CCC Camp	Middle/Late Archaic/20th century	Probably Not Eligible
38FA0337	prehistoric artifact scatter	Woodland	Probably Not Eligible
38FA0338	prehistoric artifact scatter	Middle Archaic/Unknown Prehistoric/17th/18th century	Probably Not Eligible
38FA0349	tree carving	20th century	Probably Not Eligible
38FA0359	homesite	20th century	Probably Not Eligible
38FA0360	prehistoric artifact scatter	Unknown Prehistoric	Potentially Eligible
38LX0260	prehistoric artifact scatter	Unknown Prehistoric	Probably Not Eligible

Site Number	Site Description	Cultural Affiliation	NRHP Eligibility
38LX0264	prehistoric artifact scatter	Unknown Prehistoric	Probably Not Eligible
38LX0411	1930s village (Saluda Dam)	20th century	Potentially Eligible
38LX0434	refuse deposit	20th century	Probably Not Eligible
38LX0435	lithic scatter	Unknown Prehistoric	Probably Not Eligible
38LX0436	lithic scatter/domestic scatter	Unknown Prehistoric /20th century	Probably Not Eligible
38LX0437	lithic scatter	Unknown Prehistoric	Probably Not Eligible
38LX0438	lithic scatter	Unknown Prehistoric	Probably Not Eligible
38LX0439	lithic scatter/historic scatter	Unknown Prehistoric /20th century	Probably Not Eligible
38LX0586	cemetery	20th century	Potentially Eligible
38LX0598	historic outbuilding/dump	20th century	Probably Not Eligible
38NE0006	lithic and ceramic scatter	Early Archaic to Woodland	Not Determined
38NE0644	lithic and ceramic scatter	Unknown Prehistoric	Probably Not Eligible
38NE0646	historic road	Late 19th/Early 20th century	Probably Not Eligible
38RD1323	lithic scatter	Unknown Prehistoric	Probably Not Eligible
38RD1324	lithic scatter	Unknown Prehistoric	Probably Not Eligible

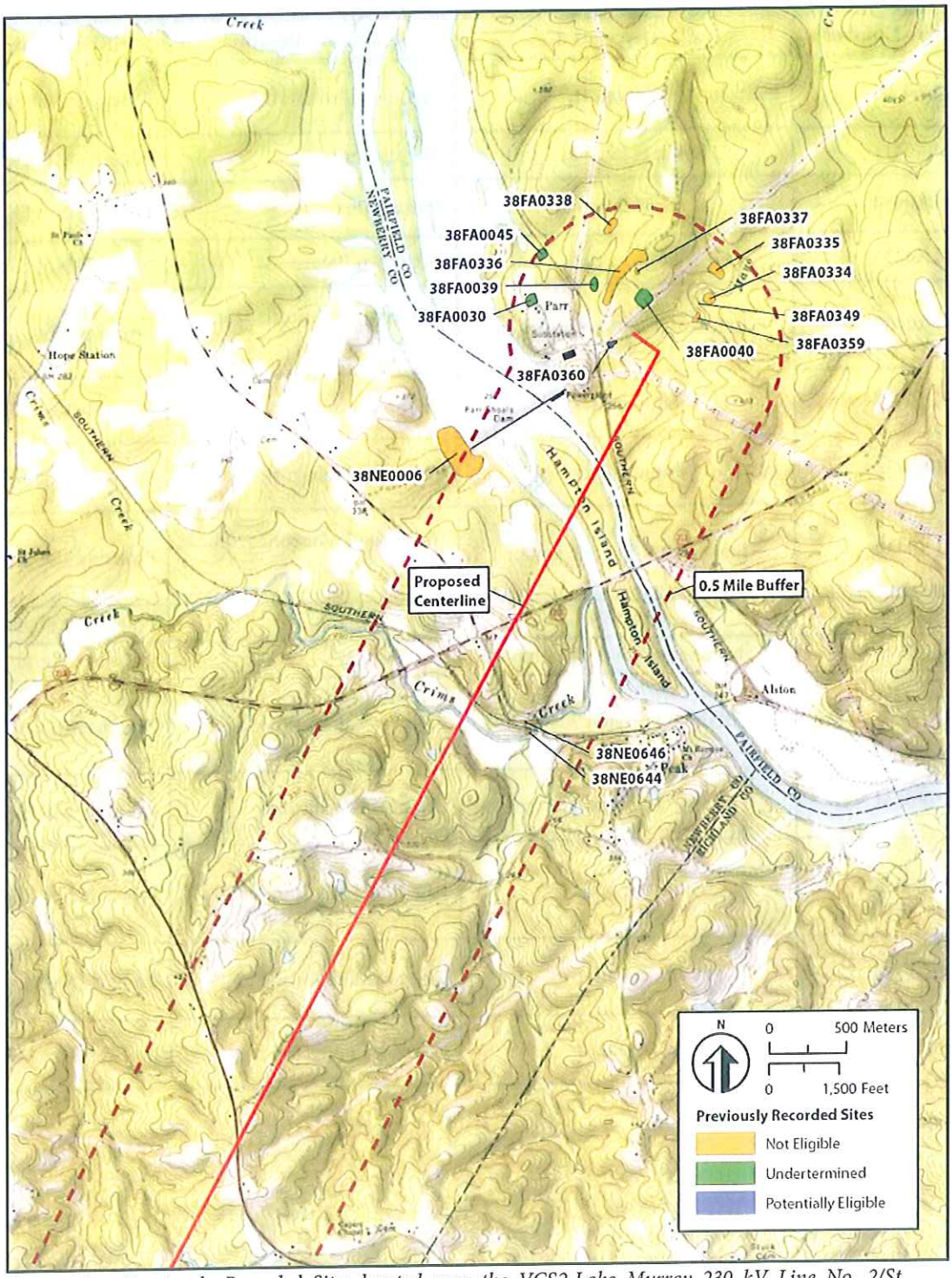

Figure 3.1 *Previously Recorded Sites located near the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, Richland County, South Carolina (continued on next page).*

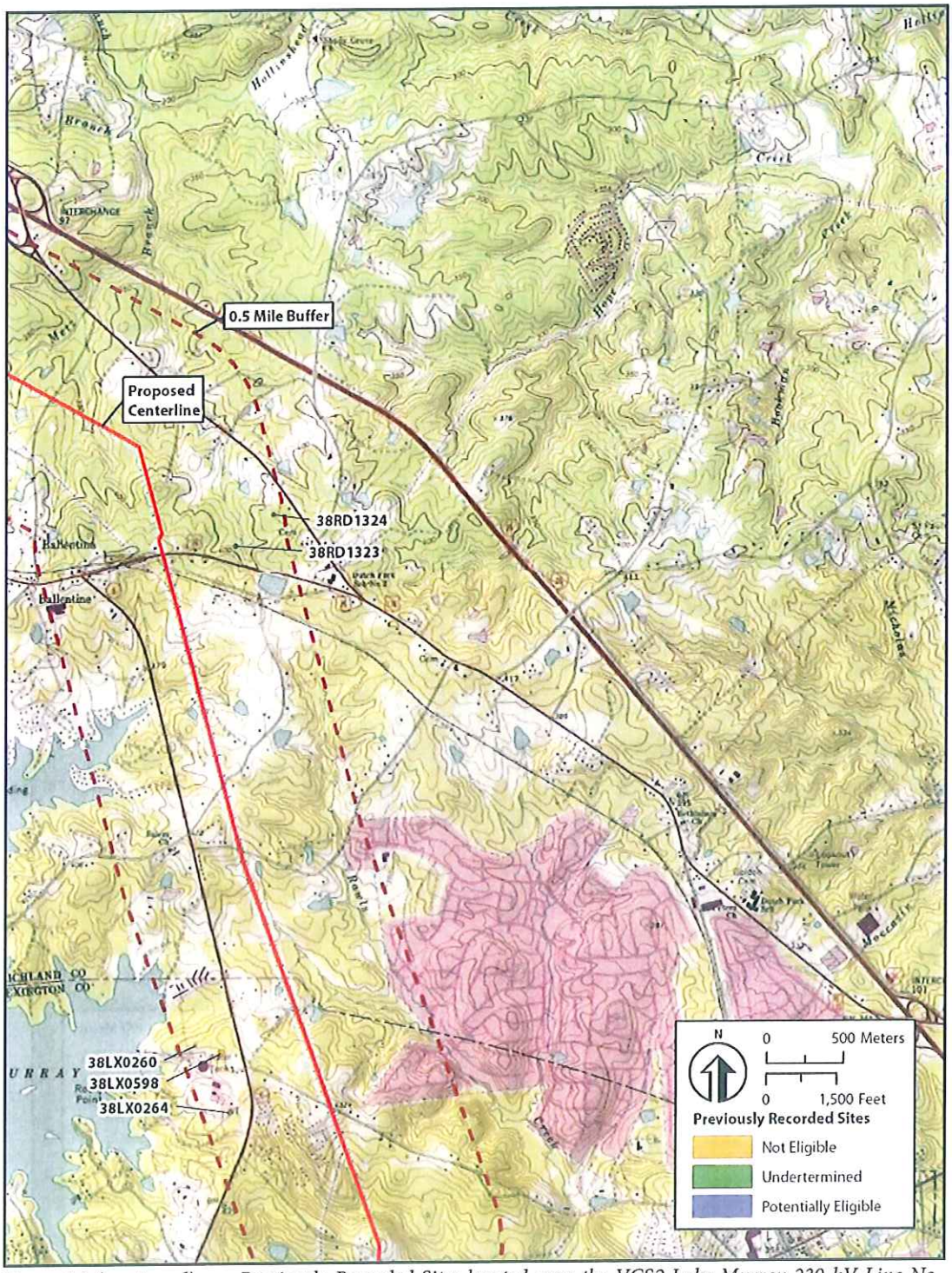

Figure 3.1 (continued) *Previously Recorded Sites located near the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, Richland County, South Carolina* *(continued on next page).*

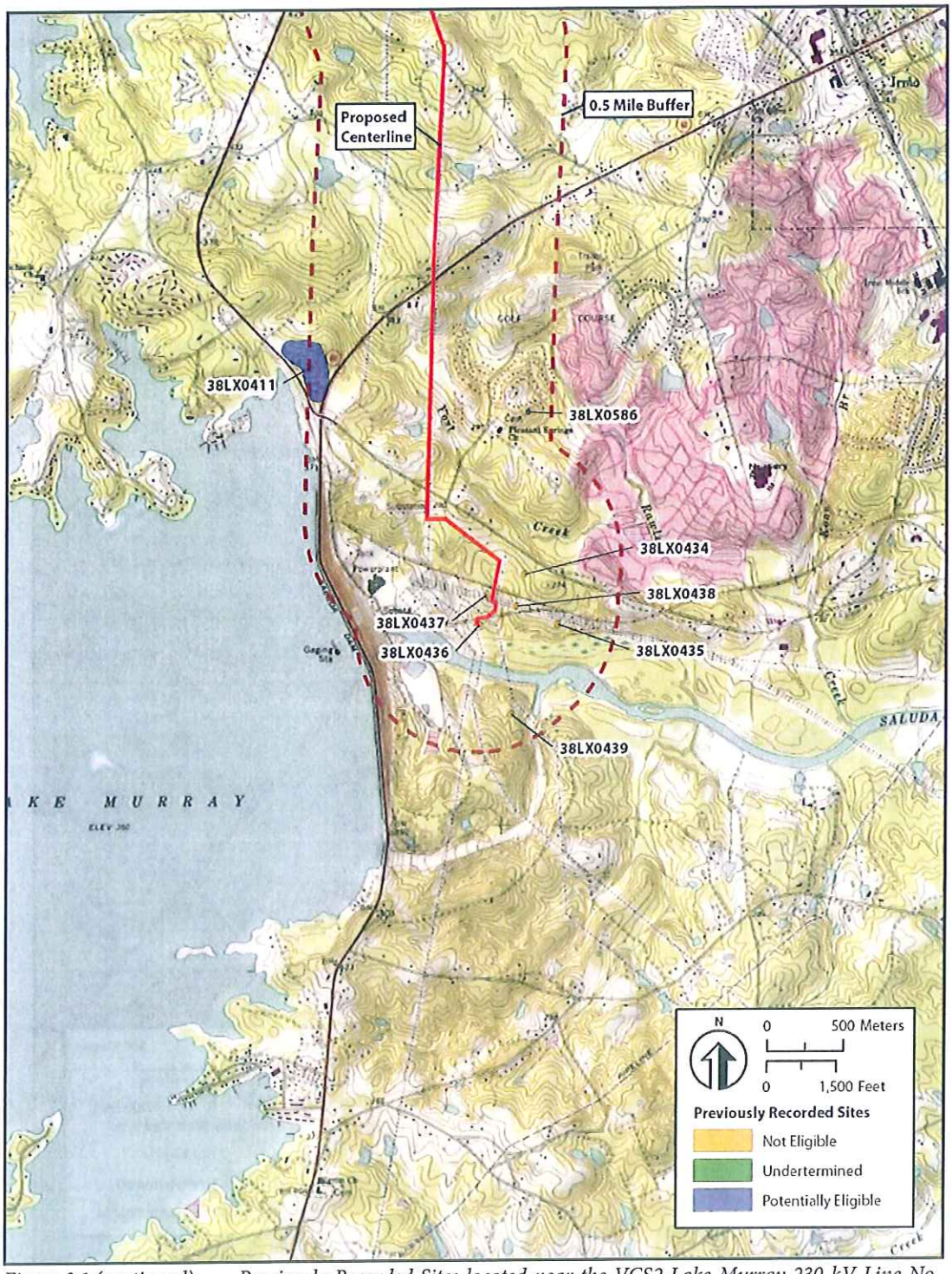

Figure 3.1 (continued) *Previously Recorded Sites located near the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, Richland County, South Carolina.*

One site, 38LX0436, is located within the APE of the proposed transmission line corridor near the Lake Murray 230/115 kV Substation. This site is a low-density prehistoric artifact scatter with a small twentieth-century historic component. This site was identified through a surface scatter of artifacts in 2001 by the Chicora Foundation during an archaeological survey of the Saluda Dam Complex (Trinkley and Southerland 2001). The survey recommended this site as probably not eligible due to the heavily disturbed nature of the soils within the site. This recommendation reached concurrence with SCSHPO and the site has been developed. Currently the site is located within the paved and developed complex of the Saldua Dam substation. A photograph showing the current environment and condition of the site can be seen in Figure 3.2. Shovel testing was not effected within this area due to the extensive nature of the onsite disturbance. Surface inspection of the area revealed no further cultural material.

Figure 3.2 *Current conditions of Site 38LX0436. Site is located where the current Saluda Dam Substation Complex is Located, Lexington County, South Carolina.*

Three of the 28 previously recorded archaeological sites (38FA360, 38LX0411, and 38LX0586) are listed as potentially eligible for the NRHP; these sites are discussed below. Site 38FA360 was identified in a 2008 addendum survey of the VC Summer Expansion Areas by New South and Associates, Inc. (Adams 2008). This site is a low-density prehistoric lithic and ceramic scatter of unknown cultural affinity. The site is located on a ridge just south of Parr Road and just east of railroads track and a wetlands area. The site is located to the immediate east of the Parr Reservoir

power facility within the VCS complex. This site is approximately .12 mile west from the northern terminus (the V.C. Summer Nuclear Station Units 2 and 3 Project Boundary), near the Parr Hydro Station of the proposed transmission line corridor (see Figure 3.1). While the site was shallow and represented by only a few artifacts, it was determined that the site contained a high potential for containing features associated with habitation, and was thus determined potentially eligible for possibly containing valuable data of the prehistoric southeast.

Site 38LX0411 was identified by the Chicora Foundation in their 2001 cultural resources survey of the Saluda Dam Complex for the SCE&G (Trinkley and Southerland 2001). Site 38LX0411 is the remnants of the Saluda Dam Village, a small short term work camp associated with the construction of Saluda Dam. This site is located approximately .5 mile west of the proposed corridor APE on the shore of Lake Murray (see Figure 3.1).

The site is a moderately dense historic scatter of early- to mid-twentieth-century artifacts and debris. This site was recommended potentially eligible under criterion D for its importance to South Carolina history. No further evaluation of this site has been undertaken since its identification.

Site 38LX0586 is a small unnamed historic community cemetery, of probable Euro-American origin. Identified independently by the Chicora Foundation in 2007 through a local informant (SCIAA 2007), the unnamed cemetery is represented by numerous and extensive fieldstone markers and a number of sunken graves. The site is located nearly .5 mile east of the proposed transmission corridor in a residential subdivision (see Figure 3.1). The identification forms list between 50 and 80 graves present within the marked boundaries of the cemetery. Further historic research of this site was recommended. The remaining 41 previously recorded archaeological sites are listed as probably not eligible or unknown.

3.2 SURVEY RESULTS

A total of 1,415 shovel tests were excavated within the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor ROW. Soils were generally very poorly drained with silty clay present at or near the surface. Typically shovel testing throughout the corridor ROW was characterized by a stratum of brown sand from 0 to 15 centimeters below surface (cmbs), underlain by silty brown to strong brown clay from 15 to 100 cmbs. Due to the nature of the soil deposition encountered, no artifacts were recovered from beneath or within the initial Ap horizon. All newly recorded sites were identified through visual inspection of the ground surface. In total, four previously unrecorded archaeological sites were identified (Figure 3.3). The newly identified archaeological sites are discussed below.

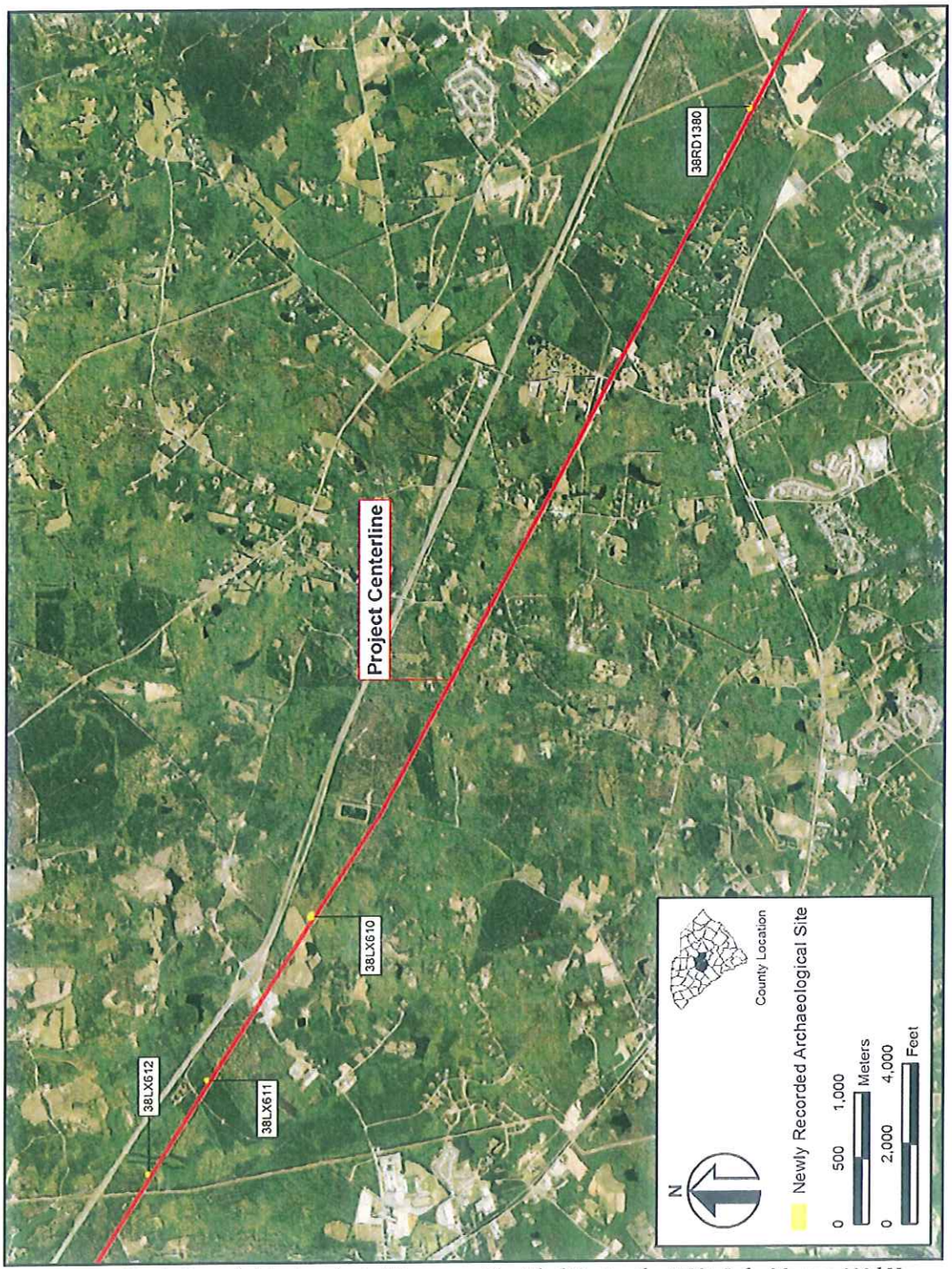

Figure 3.3 *Newly Recorded Archaeological Resources Identified During the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor, Richland County, South Carolina.*

3.2.1 38RD1380

UTM Zone: 17n
Easting: 476796
Northing: 3777747
Cultural Affiliation: 19th and 20th century American Historic
Site Type: Historic Artifact Scatter
Site Size: 15 m by 15 m
Elevation: 120 m. amsl
NRHP Eligibility: Recommended Not Eligible

Site 38RD1380 (LMSG Historic #1) is a late-nineteenth- to twentieth-century historic artifact scatter and standing structure located within the central portion of the proposed transmission corridor (see Figure 3.3). Site 38RD1380 was identified through a small surface scatter deposit and visual reconnaissance of historic artifacts within a mixed hardwood forest and grass environment (Figures 3.4 and 3.5). Surface visibility onsite was excellent (100 percent) due to the eroded nature of the topsoil. Soils encountered within the site were consistent with Nason silt loam. This soil series is characterized as well drained and usually found on hill slopes. Shovel testing within the area of the surface scatter were negative for cultural material (Figure 3.6). The site is located within the eastern ROW of a cleared transmission line corridor.

Located approximately 30 meters outside the APE of the proposed transmission line corridor is a small rectangular wooden structure. The wooden structure is located outside the archaeological APE for the project; therefore, no shovel tests were excavated around the structure, and no surface collection was performed in its immediate vicinity. The structure, however, was visually assessed. The structure is a single story wooden vernacular shed or house with a gable roof. No exterior siding treatments are present or extant. The wooden structure was constructed primarily with wire cut iron nails (Figure 3.7) with tin sheeting. Evidence of other construction material was sought but not found. The house site itself does not fall within the archaeological APE of the proposed transmission line corridor and will not be directly impacted by the development. Visual or atmospheric impacts were considered but thought to be negligible due to the presence of the existing transmission line corridor.

The surface collection of historic artifacts was exhaustive and complete and consists of solarized glass (n=1), machine threaded and molded glass (n=2), stoneware (n=2), yellowware (n=1), and whiteware (n=2). These types of artifacts see usage as early as the late nineteenth century, but are common and in present day usage. The site is noticeably disturbed with exposed subsoils. Prior clearing of the adjacent transmission corridor has disturbed the integrity of 38RD1380. The site demonstrates a complete lack of integrity due to this prior disturbance. Furthermore, assigning a definitive function to this site is therefore problematic. At best 38RD1380 could be representative of prior homesteading in the area, though the lack of any aboveground features often associated with this kind of activity leaves its function debatable. Historic USGS topographic maps from the turn of the twentieth century were consulted in regard

Figure 3.4 Environmental Profile of 38RD1380, Showing Standing Structure, Facing Northeast.

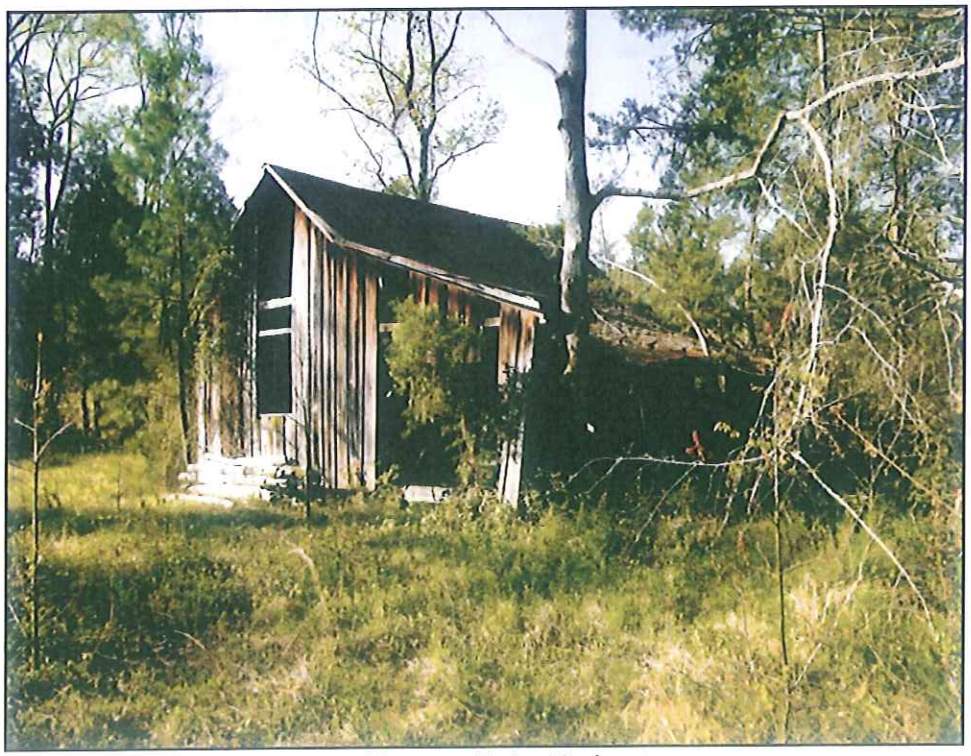

Figure 3.5 Northeastern 1/4 view of Structure, Facing Northwest.

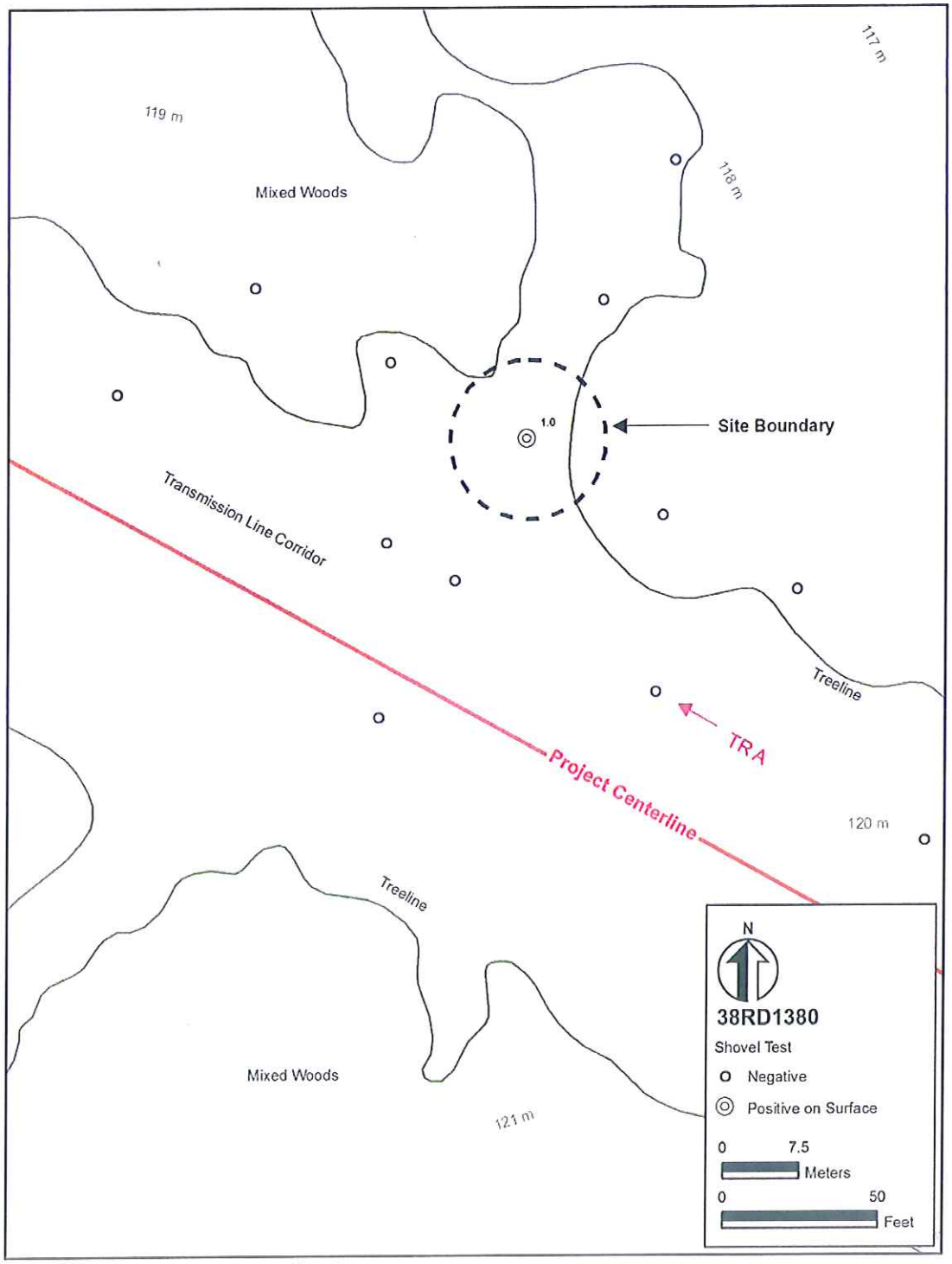

Figure 3.6 38RD1380 Site Map, Plan View.

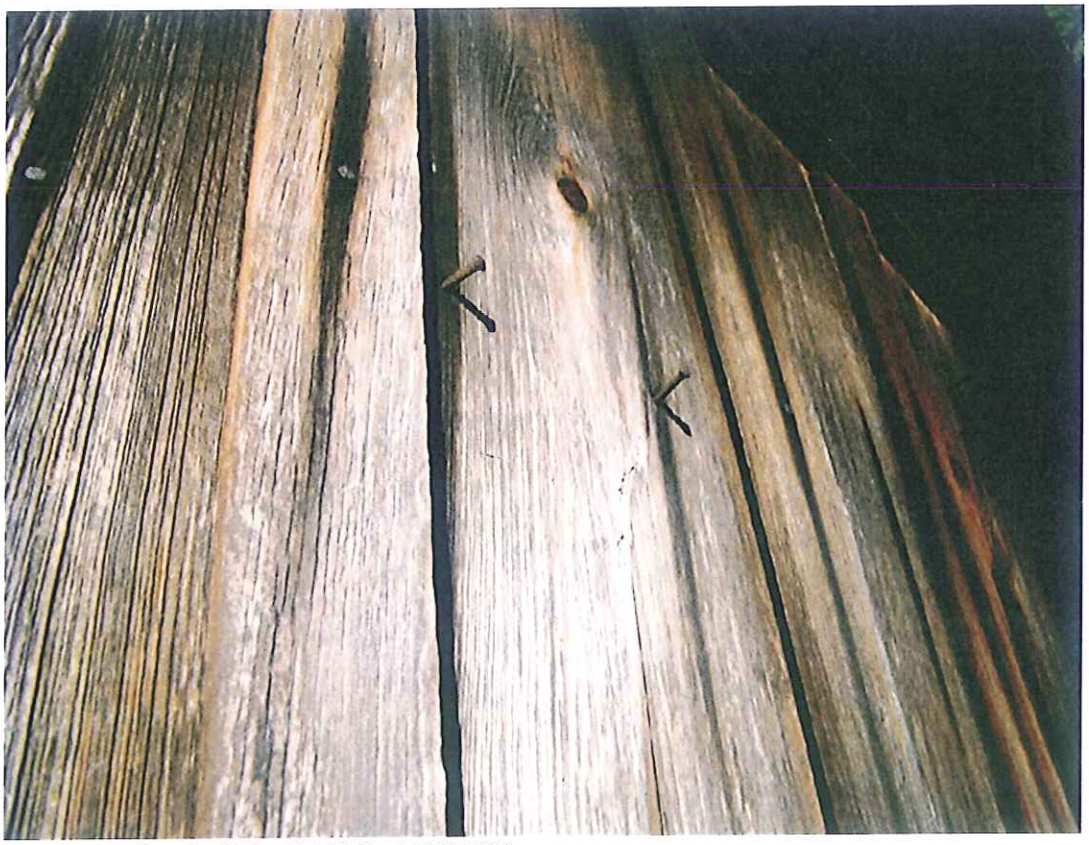

Figure 3.7 Detail of Wire Cut Nails at 38RD1380.

to the structure. According to a 1904 topographic quadrangle of Columbia, no structure is present at this time (Figure 3.8).

The amount of information which could be garnered from this site through further archaeological investigations is extremely limited due to its very poor integrity. The lack of any existing standing architecture, and intact cultural features being the most significant reasons further investigations at 38RD1380 would yield minimal information to the archaeological record of historic sites in South Carolina. In the opinion of the principal investigator, 38RD1380 does not meet the eligibility criteria for listing on the NRHP.

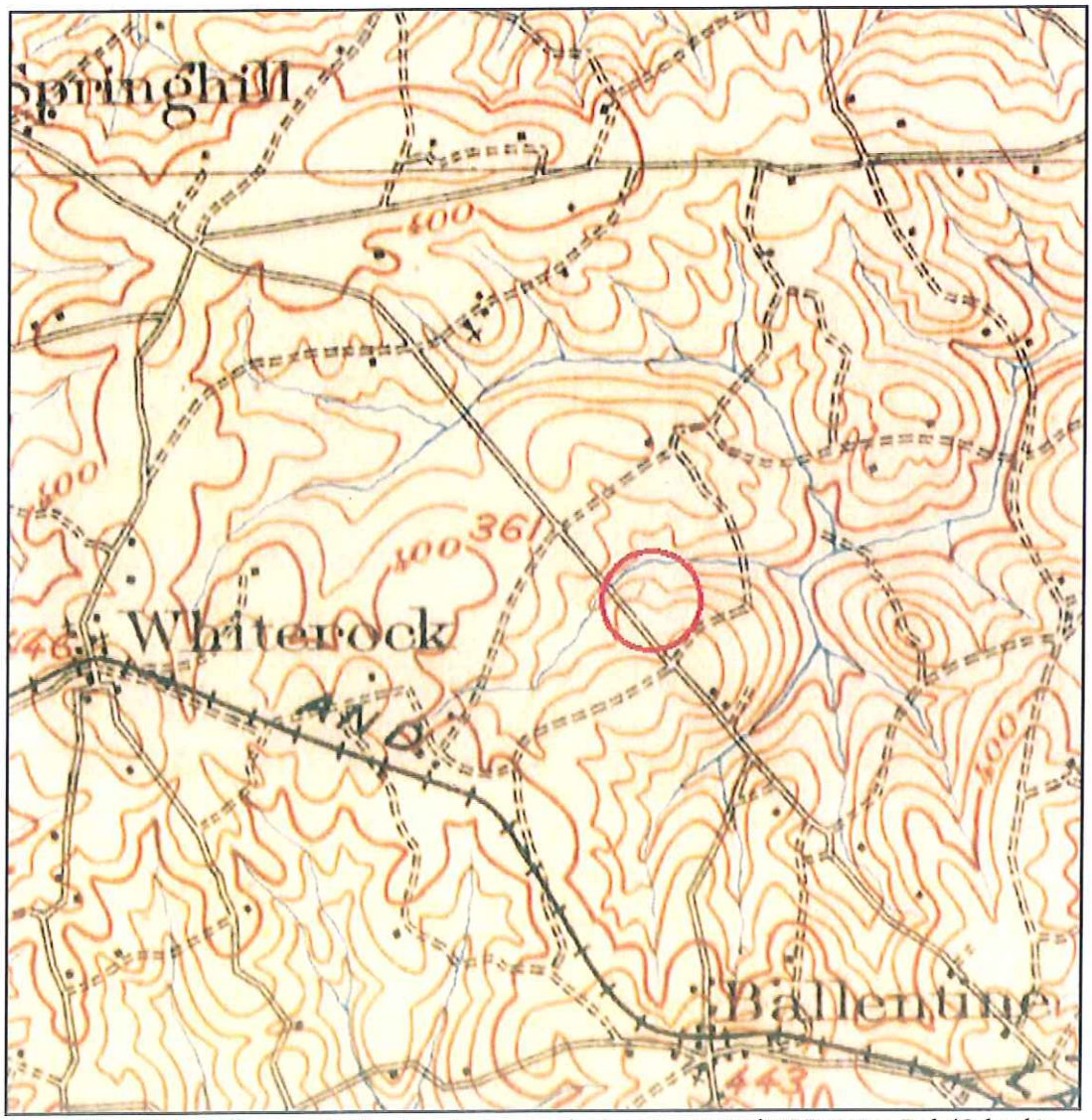

Figure 3.8 *Historic Topographic Quadrangle showing the Location Area of 38RD1380 in Red. (Columbia, South Carolina; 1904, University of South Carolina).*

3.2.2 38LX610

UTM Zone: 17n
Easting: 470676
Northing: 3781147
Cultural Affiliation: Late Archaic, Early to Middle Woodland, Unknown Prehistoric
Site Type: Lithic Scatter
Site Size: 23 m by 40 m
Elevation: 107 m. amsl
NRHP Eligibility: Recommended Not Eligible

Site 38LX610 (SGLM Prehistoric #1) is a sparse prehistoric artifact scatter located within the central leg of the proposed transmission line corridor (see Figure 3.3). The site is approximately 40 meters in length by 23 meters in width at an elevation of roughly 107 meters above mean sea level (amsl). The current environmental profile of 38LX610 is that of a typical mixed hardwood forest. The site is situated on an elevated ridge near Risters Creek (Figures 3.9 and 3.10). Some modern debris associated with a hunting station was observed.

Figure 3.9 General Environmental Profile of 38LX610 showing Eroded Topsoil, Facing North.

Figure 3.10 General Environmental Profile of 38LX610, showing Eroded and Washed Out Topsoil, Facing West.

38LX610 was identified and delineated primarily through systematic surface inspection of the surrounding area, as onsite ground surface visibility was excellent (100 percent). The boundaries of 38LX610 were delineated by exhaustive surface inspection in each cardinal direction as well as further surface further negative shovel testing (Figure 3.11).

No subsurface shovel tests were positive cultural material. No observable subsurface or aboveground features were noted during the pedestrian or field survey portion of the investigation. The site was found to be in a relatively poor state of preservation, due to the eroded topsoil, and clays were visible on the surface. Soils encountered within the site are consistent with Herndon silts; a poorly drained series commonly found along ridges.

A total of 41 artifacts were recovered from surface collecting. Of this total, the assemblage is comprised primarily of quartz lithics; specifically quartz lithic debitage (n=34), quartz biface tools (n=4), a lithic core fragment (n=1), and two diagnostic lithic projectile points (n=2). One of the recovered projectile points closely resembles an Otarre stemmed point. This quartz artifact dates from the Late Archaic to the Early Woodland Period (ca. 2650 – 650 BC). The second projectile point is a rhyolite Yadkin type dating from the Early to Middle Woodland Periods (550 BC – AD 450). The presence of diagnostic material from 38LX610 is useful in assigning a

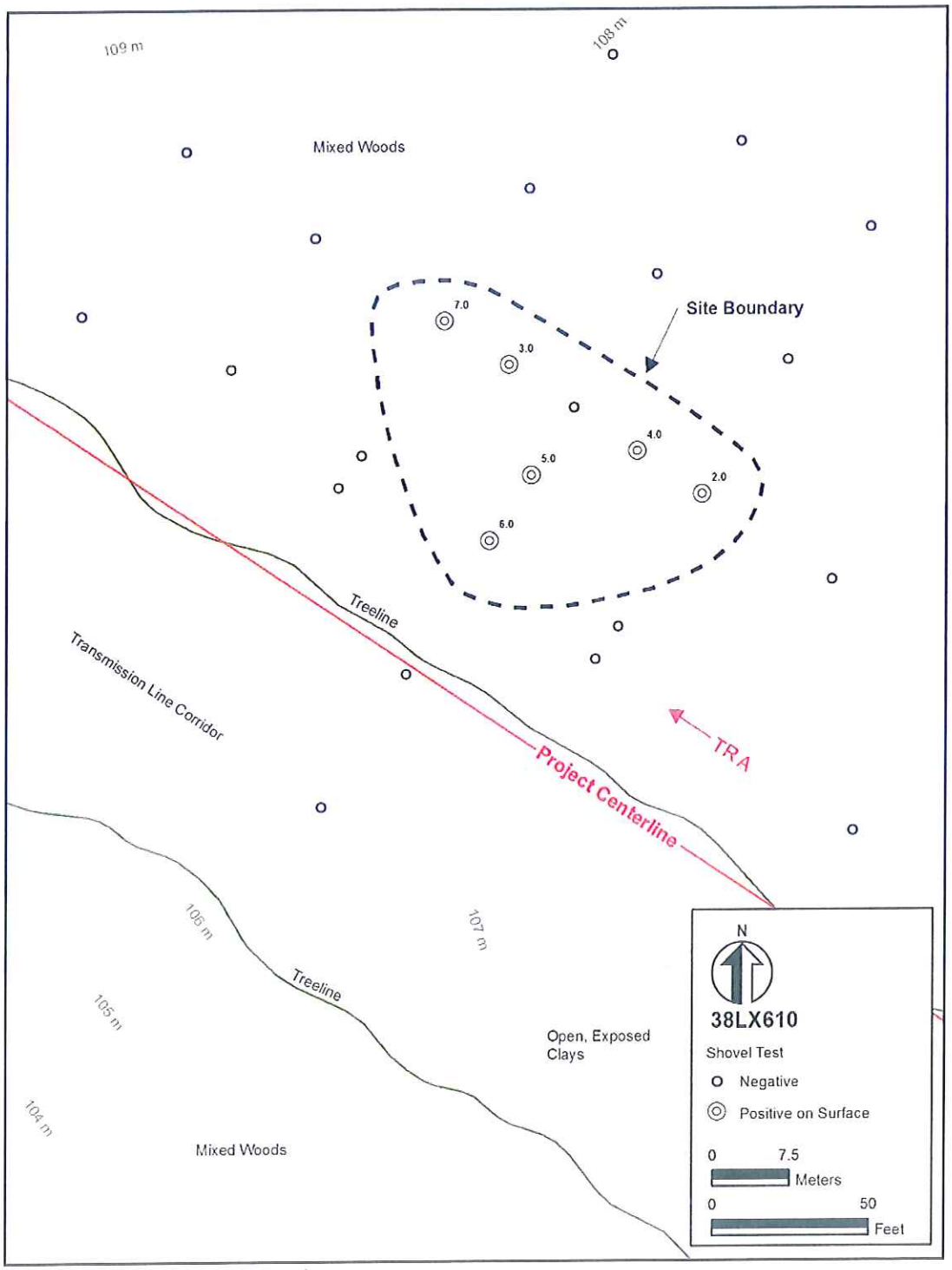

Figure 3.11 38LX610 Site Map, Plan View.

temporal range for occupation of 38LX610. However the nature of the finds (i.e. surface collection), and the lack of subsurface material, would indicate the possibility of finding stratified contexts at 38LX610 to be unlikely.

The integrity of site 38LX610 is very poor as erosion has destroyed the likelihood of finding intact contexts. Subsoils (i.e., clays) are present at the surface and prior clearing of the transmission line corridor has no doubt made redeposition and depositional mixing within the site probable. Coupled with no present intact subsurface features, 38LX610 is unlikely to yield any further data (Criterion D) which would expand our collective understanding of the prehistoric southeast. Site 38LX610 is recommended not eligible for the NRHP.

3.2.3 38LX611

UTM Zone: 17n
Easting: 469434
Northing: 3781944
Cultural Affiliation: Early to Middle Woodland, Unknown Prehistoric
Site Type: Lithic Scatter
Site Size: 30 m by 30 m
Elevation: 123 m. amsl
NRHP Eligibility: Recommended Not Eligible

Site 38LX611 is a small prehistoric lithic scatter located within the central segment of the proposed transmission line corridor (see Figure 3.3). 38LX611 was identified through surface identification on a small ridge. The site measures approximately 30 meters in width by 30 meters in length. The current vegetation profile of the site consists of a mixed hardwood forest environment with immature deciduous understory (Figures 3.12 and 3.13). No visible cultural features are noticeable above the current topography, and no cultural features were recorded during subsurface investigations.

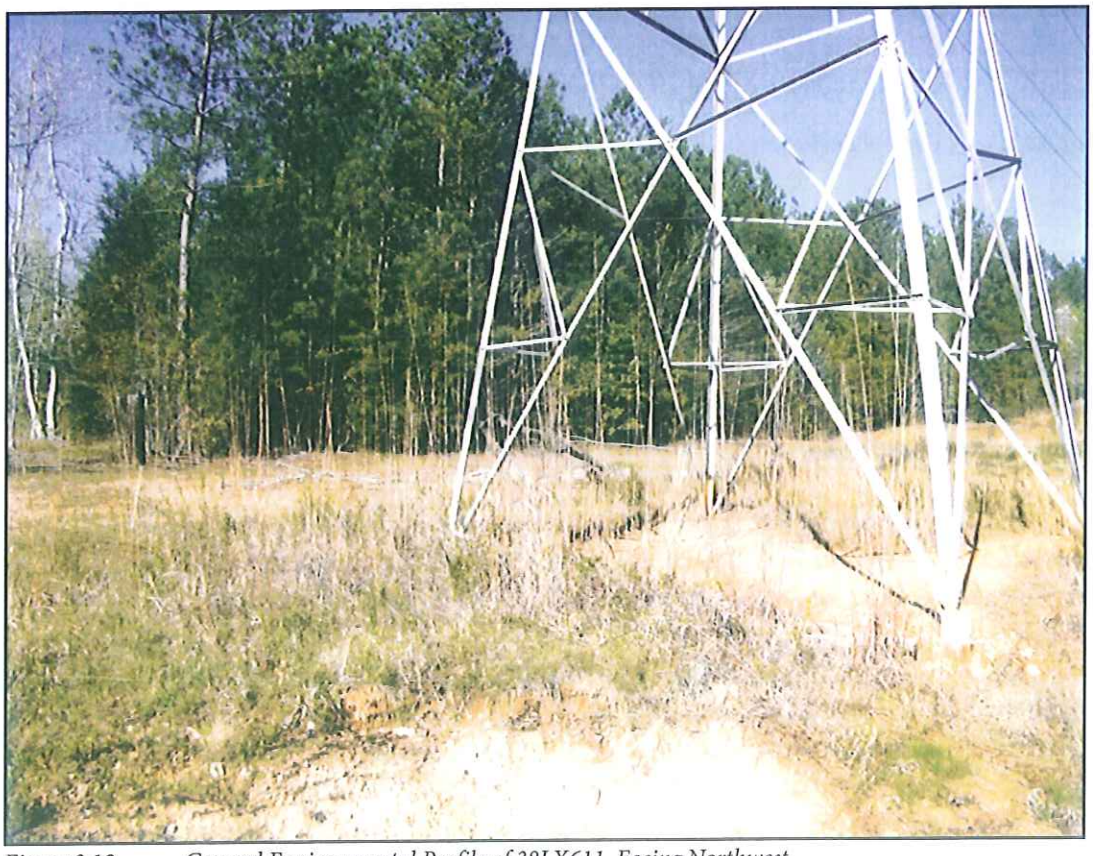

Figure 3.12 *General Environmental Profile of 38LX611, Facing Northwest.*

Figure 3.13 *General Environmental Profile of 38LX611, showing Eroded Topsoils, Facing Northeast.*

38LX611 was identified and delineated systematically through surface inspection of the surrounding area at 7.5- and 15-meter intervals, as onsite ground surface visibility was excellent (100 percent) (Figure 3.14). Soils encountered in the area of the surface scatter were consistent with Georgeville sandy loams, a well drained series usually found on hill slopes. No subsurface shovel tests were positive for cultural material. No observable subsurface or aboveground features were noted during the pedestrian or field survey portion of the investigation. The site was found to be in a relatively poor state of preservation, due to the eroded topsoil.

The material assemblage found at this site consists of quartz lithic debitage (n=2), a quartz biface tool fragment (n=1), and a diagnostic (Yadkin) quartz projectile point (n=1). The Yadkin point dates from the Early to Middle Woodland Periods (550 BC – AD 450).

There is more than enough evidence present to suggest the integrity of 38LX611 has been compromised by erosion. In addition, Site 38LX611 does not contain the wealth of cultural material usually found at significant archaeological sites. Nor does it contain the requisite features commonly associated with NRHP eligible resources. The overall dearth of artifacts, and lack of features suggest the research potential of 38LX611 to be limited. Brockington recommends that site 38LX611 does not meet the eligibility requirements necessary for the NRHP.

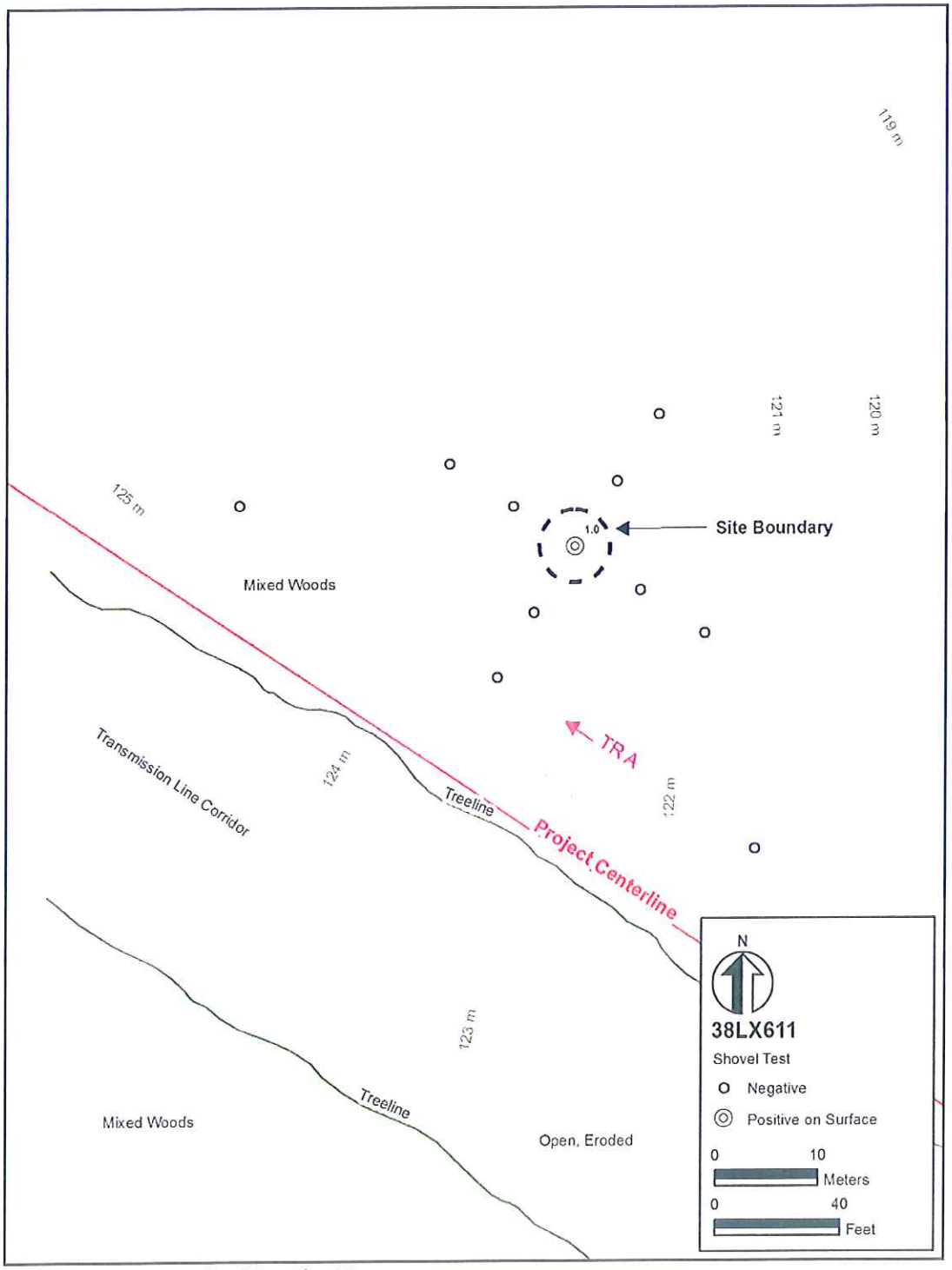

Figure 3.14 38LX611 Site Map, Plan View.

3.2.4 38LX612

UTM Zone: 17n
Easting: 468728
Northing: 3782410
Cultural Affiliation: Prehistoric Unknown, 18th, 19th, and 20th Century American Historic
Site Type: Lithic Scatter, Historic Artifact Scatter
Site Size: 23 m by 15 m
Elevation: 103 m. amsl
NRHP Eligibility: Recommended Not Eligible

The SGLM Multi-Component Artifact Scatter (38LX612) site is primarily a historic artifact scatter with a small low-density prehistoric component. This site was identified through a surface scatter of 12 artifacts situated on a ridge side slope within the central portion of the proposed transmission line corridor (see Figure 3.3).

The site measure approximately 23 meters in length by 15 meters in width. The site was delineated at 7.5- and 15-meter interval shovel testing and surface inspection. The current vegetation profile of the site consists of a mixed hardwood forest and grass environment (Figures 3.15 and 3.16). Onsite ground surface visibility was excellent (100 percent) due to the eroded nature of the topsoil. Clays were present on the surface. Soils encountered in the area of the surface finds were consistent with Georgeville sandy loams, a well drained series usually found on hill slopes. No visible cultural features are noticeable above the current topography, and no cultural features were recorded during subsurface investigations. No shovel tests within the site were positive for cultural material (Figure 3.17). The overall condition of 38LX612 is very poor as erosion has nearly eliminated the Ap horizon, exposing subsurface clay.

A total of 12 artifacts were recovered at site 38LX612 and are predominantly historic in nature. Prehistoric artifacts consisted of quartz debitage (n=3) and quartz biface tool fragments (n=2). Prehistoric artifacts were undiagnostic. Historic artifacts recovered from survey consisted of whiteware ceramics (n=3), pearlware (n=1), green bottle glass (n=1), a kaolin pipe stem fragment (n=1), and a blue and white glass jewelry stone. The nature of the artifacts and their relative usage in history suggest a mid-nineteenth-century date; however, this is difficult to pinpoint with any certainty as these types of artifacts were in use well into the twentieth century.

No standing, or otherwise fallen, architecture is present at 38LX612. The amount of information which could be garnered from this site through further archaeological investigations is extremely limited due to its very poor integrity and state of preservation. The lost context for artifact deposits, lack of any existing standing architecture, and intact cultural features being the most significant reasons further investigations at 38LX612 would yield minimal information to the archaeological record of historic sites in South Carolina. In the opinion of the Principal Investigator, 38LX612 does not meet the eligibility criteria for listing on the NRHP.

Figure 3.15 General Environmental Profile of 38LX612, Facing Northwest.

Figure 3.16 General Environmental Profile of 38LX612, Facing East.

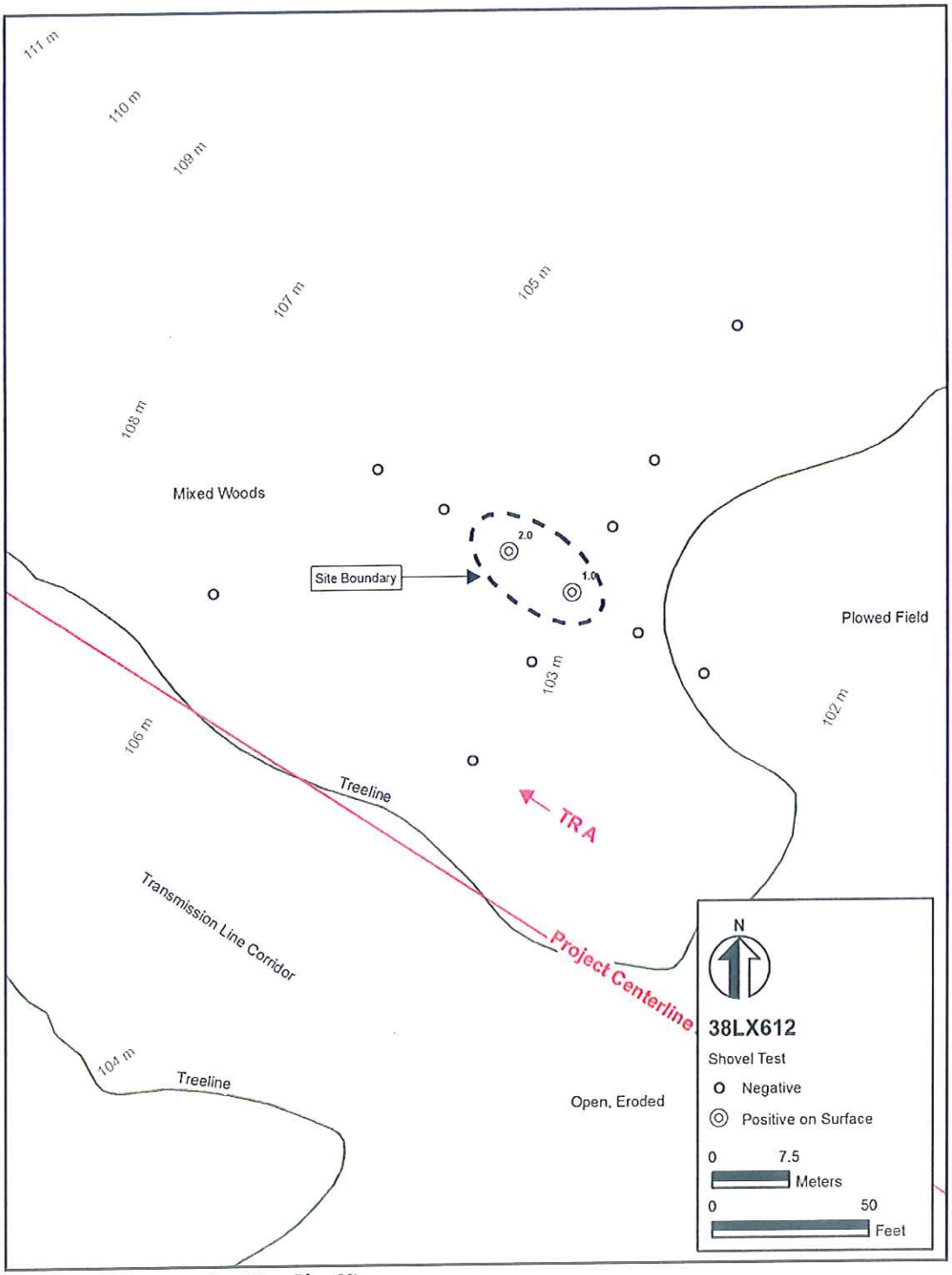

Figure 3.17 38LX612 Site Map, Plan View.

3.3 SUMMARY AND CONCLUSIONS

Background research was conducted at the SCIAA of Columbia, South Carolina, to determine if any previously recorded archaeological sites exist within the footprint of the proposed corridor. In addition, the list of NRHP properties was reviewed at the SCIAA. In total 28 previously recorded archaeological resources are located within a half mile of the corridor. One previously recorded archaeological resource (38LX0436) has been recorded within the footprint of the proposed corridor at the Lake Murray 230/115 kV Substation. Site 38LX0436 is listed as not eligible for the NRHP and has since been destroyed. It currently lies beneath the Saluda Dam substation. No previously recorded potentially eligible or eligible resource will be affected by the proposed development.

In total, 1,415 shovel tests were excavated along the approximately 20-mile proposed transmission line corridor, resulting in the identification of four previously unrecorded archaeological sites. Two of these sites, 38LX610 and 38LX611, are low-density prehistoric lithic and artifact scatters. Site 38RD1380 is a low-density historic artifact scatter and a standing structure (located outside the APE) while 38RD612 represents a multi-component prehistoric and historic artifact scatter. These sites are typical of low-density prehistoric and historic scatters located throughout the Southeast and do not generally display the wealth of material and features often associated with significant archaeological resources in South Carolina. The research potential of these sites is extremely limited and, overall, these sites do not warrant further study. They are all, therefore, recommended not eligible for the NRHP.

In summation, the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor investigation resulted in the identification of four previously unrecorded archaeological sites. The sites are recommended ineligible for NRHP listing. Brockington recommends no further research necessary in regard to these newly identified archaeological sites. The proposed VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Transmission Line Corridor will not affect any significant archaeological resources.

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APPENDIX A: ARTIFACT CATALOG

Artifact Catalog

Brockington and Associates, Inc. uses the following proveniencing system. Provenience 1 designates general surface collections. Numbers after the decimal point designate subsequent surface collections, or trenches. Proveniences 2 to 200 designate shovel tests. For all provenience numbers except 1, the numbers after the decimal point designate levels. Provenience X.0 is a surface collection at a shovel test or unit. X .1 designates level one, and X.2 designates level two.

Table of Contents

Site Number: 38LX610

Catalog #	*Count*	*Weight (in g)*	*Artifact Description*	*Lithic Type*	*Temporal Range*	*Comments*
E NUMBER:	38LX610					
Provenience Number:	**2 . 0**		**Locus Mile 12, Transect A, Shovel Test 34, Surface**			
1	1	0.05	Translucent Quartz Non-Cortical 1/4 inch Flake Fragment			
2	2	3.1	Translucent Quartz Non-Cortical 1/2 inch Flake Fragment			
3	1	1.7	Translucent Quartz Cortical Bifacial Reduction 1/2 inch Flake			
4	1	6.3	Translucent Quartz Cortical Bifacial Reduction 3/4 inch Flake			
5	2	8.9	Translucent Quartz Non-Cortical 3/4 inch Flake Fragment			
6	1	1.4	Translucent Quartz Biface Tool Proximal			
7	1	14.4	Translucent Quartz Biface Tool			
8	1	5.2	Translucent Quartz Projectile Point Tool	Otarre	Late Archaic/Early Woodland (2650-650 BC)	Tip Broken
Provenience Number:	**3 . 0**		**Locus Mile 12, Transect A, Shovel Test 35, 7.5m E, surface**			
1	1	1.2	Translucent Quartz Biface Tool Distal			
2	1	28.4	Translucent Quartz Core Fragment			
3	1	4.6	Translucent Quartz 1/2 inch Flake Fragment			
4	1	0.7	Translucent Quartz 1/4 inch Flake Fragment			
Provenience Number:	**4 . 0**		**Locus Mile 12, Transect A, Shovel Test 34, 7.5m W, surface**			

Site Number: 38LX610

Catalog #	*Count*	*Weight (in g)*	*Artifact Description*	*Lithic Type*	*Temporal Range*	*Comments*
1	1	2.1	Rhyolite Projectile Point Tool	Yadkin	Early/Middle Woodland (550 BC-450 AD)	
2	1	17	Translucent Quartz Biface Tool Fragment			
3	1	3.2	Translucent Quartz Non-Cortical Core Reduction 3/4 inch Flake			
4	2	6	Translucent Quartz Non-Cortical Core Reduction 1/2 inch Flake			
5	2	1.4	Translucent Quartz 1/4 inch Flake Fragment			
Provenience Number:		5.0	**Locus Mile 12, Transect A, Shovel Test 34, 15m W, 7.5m S, surface**			
1	1	17.4	Translucent Quartz 1 inch Flake Fragment			
2	3	6.8	Translucent Quartz 1/2 inch Flake Fragment			
3	2	0.9	Translucent Quartz 1/4 inch Flake Fragment			
Provenience Number:		6.0	**Locus Mile 12, Transect A, Shovel Test 34, 15m W, 15m S, surface**			
1	1	11.1	Translucent Quartz Non-Cortical Core Reduction 3/4 inch Flake			
2	1	5.3	Translucent Quartz Non-Cortical Core Reduction 3/4 inch Flake			
3	1	7.8	Translucent Quartz 1/2 inch Flake Fragment			
4	1	1.1	Translucent Quartz 1/4 inch Flake Fragment			
Provenience Number:		7.0	**Locus Mile 12, Transect A, Shovel Test 35, Surface**			
1	4	1.4	Translucent Quartz Non-Cortical 1/4 inch Flake Fragment			
2	1	2.3	Milky Quartz Cortical 1/2 inch Flake Fragment			
3	3	4.7	Translucent Quartz Non-Cortical 1/2 inch Flake Fragment			
4	1	3	Translucent Quartz Non-Cortical 3/4 inch Flake			
5	1	5.2	Milky Quartz Non-Cortical Core Reduction 3/4 inch Flake			
SITE NUMBER:			38LX611			
Provenience Number:		1.0	**Locus Mile 13, Transect A, Shovel Test 31, Surface**			
1	1	9.7	Translucent Quartz Projectile Point Tool	Yadkin	Early/Middle Woodland (550 BC-450 AD)	Tip Broken
2	1	18.1	Translucent Quartz Biface Tool Fragment			
3	1	5.7	Translucent Quartz Non-Cortical Core Reduction 3/4 inch Flake			
4	1	4.9	Translucent Quartz Non-Cortical 3/4 inch Flake Fragment			
SITE NUMBER:			38LX612			

Site Number: 38LX612

Catalog #	*Count*	*Weight (in g)*	*Artifact Description*	*Lithic Type*	*Temporal Range*	*Comments*
Provenience Number:		**1 . 0**	**Locus Mile 14, Transect A, Shovel Test 6, Surface**			
1	1	1.6	Pearlware, Blue Underglaze Hand Painted Body		1779-1835	
2	1	11.9	Whiteware, Undecorated Plate Rim		c1820+	
3	1	1.9	Whiteware, Undecorated Body		c1820+	
4	1	2.7	Whiteware, Undecorated Base		c1820+	
5	1	8.2	Olive Green Glass Bottle Body		1904-	
6	1	0.8	Blue and White Molded Glass Embossed Jewelry Stone			
7	1	2	Kaolin Pipe Stem Fragment			
8	1	18.9	Translucent Quartz Biface Tool Fragment			
9	1	31.9	Translucent Quartz Biface Tool Fragment			
10	1	2.4	Milky Quartz Non-Cortical 1/2 inch Flake Fragment			
11	1	2.3	Translucent Quartz Cortical Core Reduction 1/2 inch Flake			
ovenience Number:		**2 . 0**	**Locus Mile 14, Transect A, Shovel Test 6, 7.5m W, surface**			
1	1	1	Translucent Quartz 1/4 inch Flake Fragment			

SITE NUMBER: 38RD1380

Provenience Number:		**1 . 0**	**Locus Mile 8, Transect A, Shovel Test 17, Surface**			
1	1	11.1	Stoneware, Salt Glazed Gray-Bodied Body			
2	1	17.5	Stoneware, Brown Glazed Buff-Bodied Body			
3	1	1.4	Yellowware, Undecorated Rim		1820-1940	
4	1	1	Whiteware, Undecorated Base		c1820+	
5	1	1	Whiteware, Undecorated Body		c1820+	
6	1	4.3	Solarized - Amethyst Glass Container Body		1880-1915	
7	1	4.5	Milkglass Machine-Made Canning Jar Lid Liner Fragment		1869-	Embossed "2" "BOYD..."
8	1	2	Colorless Molded Glass Container Body		1904-	

Projectile Point/Biface Forms

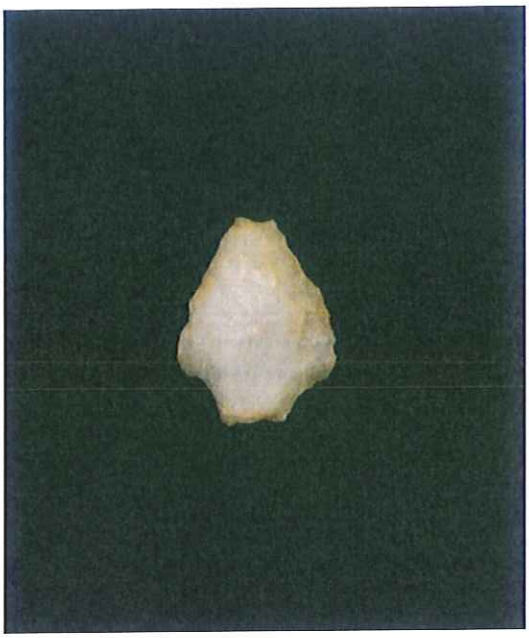
Site Number: 38LX610

Provenience #: 2 . 0

Catalog Number: 8

All measurements are in mm.

Complete Tool Length:	0.0
Complete Tool Width:	23.5
Complete Tool Thickness:	7.4
Haft Element Length:	5.0
Haft Element Width:	10.4
Haft Element Thickness:	5.9
Shoulder Length:	2.8
Lithic Type:	Translucent Quartz
Point Type:	Otarre
Period:	Late Archaic/Early Woodland (2650-650 BC)
Remarks:	Tip Broken



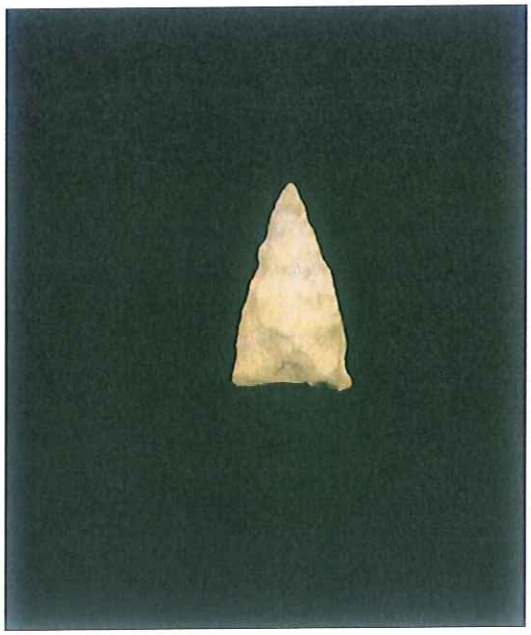
Actual Size/Scanned Image

Provenience #: 4 . 0

Catalog Number: 1

All measurements are in mm.

Complete Tool Length:	29.5
Complete Tool Width:	13.8
Complete Tool Thickness:	4.2
Haft Element Length:	0.0
Haft Element Width:	17.8
Haft Element Thickness:	2
Shoulder Length:	0
Lithic Type:	Rhyolite
Point Type:	Yadkin
Period:	Early/Middle Woodland (550 BC-450 AD)
Remarks:	



Actual Size/Scanned Image

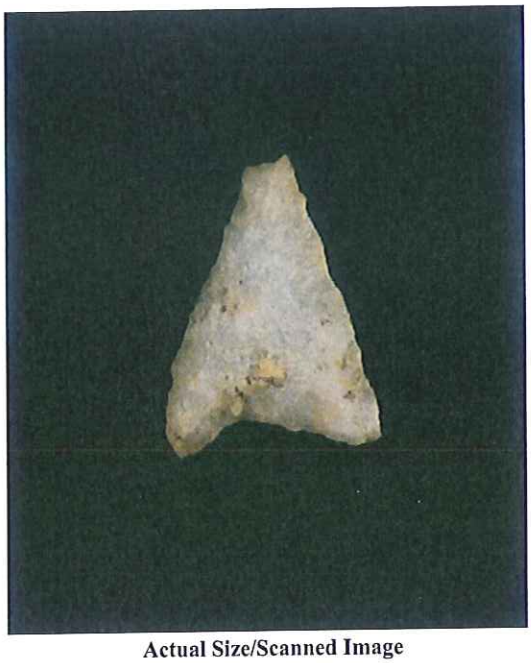
Site Number: 38LX611

Provenience #: 1 . 0

Catalog Number: 1

All measurements are in mm.

Complete Tool Length:	0.0
Complete Tool Width:	32.0
Complete Tool Thickness:	9.2
Haft Element Length:	0.0
Haft Element Width:	0.0
Haft Element Thickness:	0
Shoulder Length:	0
Lithic Type:	Translucent Quartz
Point Type:	Yadkin
Period:	Early/Middle Woodland (550 BC-450 AD)
Remarks:	Tip Broken



Actual Size/Scanned Image

APPENDIX B: SCIAA SITE FORMS

SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA
SITE INVENTORY RECORD
(68-1 Rev. 85)

STATE: SC COUNTY: Richland County SITE NUMBER: 38RD1380
Recorded By: A. Pappas Affiliation: Brockington & Associates, Inc. Date: 5/9/2011

A. GENERAL INFORMATION

1. Site name: FS - 1 Project: Phase I Arch Surv. Of the PIKE 230kV Tran Line St. George Segment
2. USGS Quadrangle: Chapin Date: _____ Scale: [7.5] or 15 minute (circle one)
3. UTM: Zone 17N Easting 476796 Northing 3777747
4. Other map reference: County Road Map
5. Descriptive site type (see handbook):
   Prehistoric _____ Historic Historic Scatter
6. Archaeological investigation (circle): [Survey] Testing Excavation
7. Property owner: Unknown Phone number: _____
8. Address: _____
9. Other site designations: _____
10. National Register of Historic Places status (circle one):
    Potentially eligible [Probably not eligible] Additional work

---- Office Use Only----

Determined eligible On NRHP Date _____ Determined not eligible Date _____

11. Level of significance (circle): National State Local
12. Justification: _____

B. ENVIRONMENT AND LOCATION

1. General physiographic province (circle):
   Lower Coastal Plain Middle Coastal Plain [Upper Coastal Plain]
   Piedmont Blue Ridge Mountains
2. Landform location: ridge side slope Site elevation (above MSL): 394 (in feet)
3. On site soil type: silt loam Soil classification: Nason
4. Major river system (circle): Pee Dee [Santee] Ashley-Combahee-Edisto Savannah
5. Nearest river/stream: Wildhorse Branch
6. Current vegetation (circle): Pine/coniferous Hardwood [Mixed pine/hardwood]
   Old field Grass/pasture Agricultural/crops Wetlands/freshwater
   Wetlands/saltwater Other Comments: _____
7. Description of groundcover (circle): [Absent] Light Moderate Heavy

C. SITE CHARACTERISTICS

1. Estimated site dimensions: 15 meters by 15 meters
2. Site depth: 0 cm.
3. Cultural features (type and number):

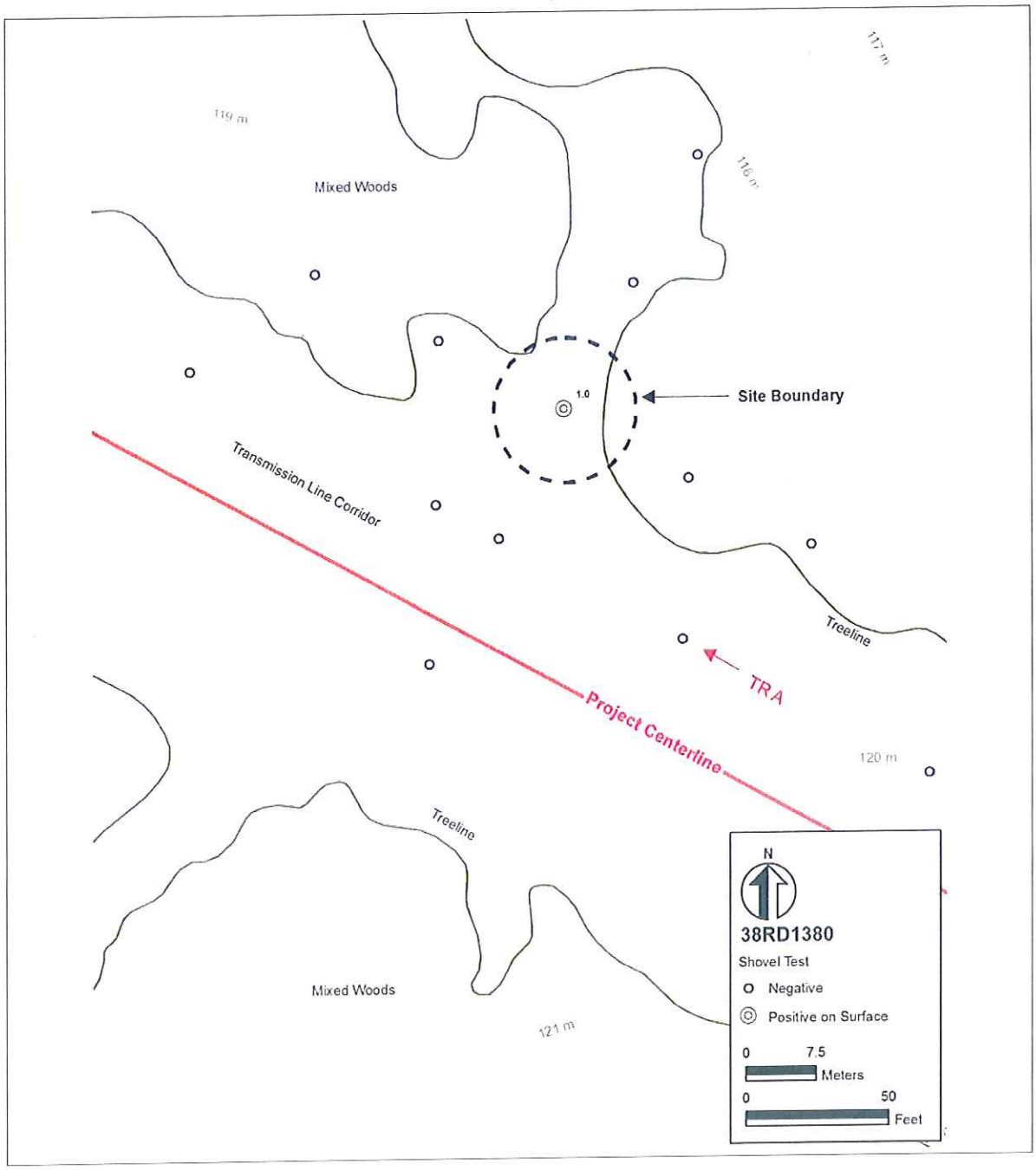
4. Presence of (circle): midden floral remains faunal remains shell charcoal
5. Human skeletal remains (circle): present [absent] preservation (circle): good poor
6. General site description:

Site is a low density historic artifact scatter identified through surface inspection of eroded ridgetop. No above ground features were noted. Site appears to be the remains of a diffuse small scale dump of glass and ceramic artifacts.

(Use in conjunction with handbook)

Site Number: 38RD1380

Site Map



The following information should be provided on the site map: site boundaries, nearby topographic features, associated streams, modern cultural features, different land use types in site area, collection loci, test excavation loci, archaeological features and means of access (include north arrow and scale).

MAP KEY: (see map)

Verbal description of location:

Site is located between Ranch-Metz Road and Steve Free road roughly 2 miles northwest of Ballentine South Carolina. Site is located along the eastern side of a preexisting transmission line corridor along a ridge. Accessible currently only on foot.

. ARCHAEOLOGICAL COMPONENTS

____	Paleo Indian	____	Middle Woodland	____	17th Century
____	Early Archaic	____	Late Woodland	____	18th Century
____	Middle Archaic	____	Mississippian	X	19th Century
____	Late Archaic	____	Unknown prehistoric	X	20th Century
____	Early Woodland	____	16th Century	____	Unknown historic

E. DATA RECOVERED

List materials recovered: Total number of artifacts: 8

Stoneware (1), yelloware (1), whiteware (1), solarized amethyst glass (1), milkglass (1), molded glass base (1)

(Attach additional artifact inventory sheets if needed)

F. DATA RECOVERY METHODS

Ground surface visibility (circle one): 0% 1-25% 26-50% 51-75% 76-100%

. Number of person hours spent collecting (total hours X total people): 2

3. Description of surface collection methods (circle):

Type: grid collection
grab collection
controlled sampling
other (specify): ____

Extent: complete
selective
no collection made

4. Description of testing methods (circle):

Systematic
Nonsystematic

Type visual inspection

Test units:

Number	Size/max. depth	
1	0	cm.
____	____	cm.
____	____	cm.

5. Description of excavation units:

Number	Size/max. depth		Comments:
____	____	cm.	
____	____	cm.	
____	____	cm.	
____	____	cm.	

G. MANAGEMENT INFORMATION

1. Present land use (circle):

Agricultural
Forest
Fallow
Residential, low density
Residential, high density
Commercial
Industrial
Other (specify) ____

MANAGEMENT INFORMATION (Cont.)

2. Present condition/integrity of site (circle):
Intact **Damaged**
Extent of damage: light | moderate | heavy
Nature of damage: **erosion** | cultivation | logging | construction/development | vandalism | inundation | other (specify) _____

3. Potential impacts and threats to site (circle):
Potential threat: none | low | moderate | **high**
Nature of threat: erosion | cultivation | logging | **construction/development** | vandalism | inundation | other (specify) _____
Nature of threat: direct impact zone | indirect impact zone | outside impact zone | indeterminate

4. Recommendations for further work (circle):
survey testing excavation archival **none** other: _____
Comments: _____

5. References (circle): Historic/archival documentation Yes **No** Not Known
Archaeological documentation Yes **No** Not Known

6. Additional management information/comments:
No further management of the site is warranted.

7. Location of existing collections: Brockington & Associates, Inc.
8. Location of photographs: Brockington & Associates, Inc.
9. Location of special samples: None Taken
Type of special samples: None Taken

Signature of observer: _____ Date: 7/12/2011

Subsequent visits:
Observer _____ Date: _____
Observer _____ Date: _____
Observer _____ Date: _____

SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA
SITE INVENTORY RECORD
(68-1 Rev. 85)

STATE: SC COUNTY: Lexington County SITE NUMBER: 38LX610
Recorded By: A. Pappas Affiliation: Brockington & Associates, Inc. Date: 5/9/2011

A. GENERAL INFORMATION

1. Site name: FS - 2 Project: Phase I Arch Surv. Of the PIKE 230kV Tran Line St. George Segment
2. USGS Quadrangle: Chapin Date: _____ Scale: 7.5 or 15 minute (circle one)
3. UTM: Zone 17N Easting 470676 Northing 3781147
4. Other map reference: County Road Map
5. Descriptive site type (see handbook):
   Prehistoric Lithic Scatter Historic _____
6. Archaeological investigation (circle): Survey Testing Excavation
7. Property owner: Unknown Phone number: _____
8. Address: _____
9. Other site designations: _____
10. National Register of Historic Places status (circle one):
    Potentially eligible Probably not eligible Additional work

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Office Use Only

Determined eligible On NRHP Date _____ Determined not eligible Date _____

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11. Level of significance (circle): National State Local
12. Justification: _____

B. ENVIRONMENT AND LOCATION

1. General physiographic province (circle):
   Lower Coastal Plain Middle Coastal Plain Upper Coastal Plain
   Piedmont Blue Ridge Mountains
2. Landform location: Ridge Site elevation (above MSL): 351 (in feet)
3. On site soil type: silt Soil classification: Herndon
4. Major river system (circle): Pee Dee Santee Ashley-Combahee-Edisto Savannah
5. Nearest river/stream: Risters Creek
6. Current vegetation (circle): Pine/coniferous Hardwood Mixed pine/hardwood
   Old field Grass/pasture Agricultural/crops Wetlands/freshwater
   Wetlands/saltwater Other Comments: _____
7. Description of groundcover (circle): Absent Light Moderate Heavy

C. SITE CHARACTERISTICS

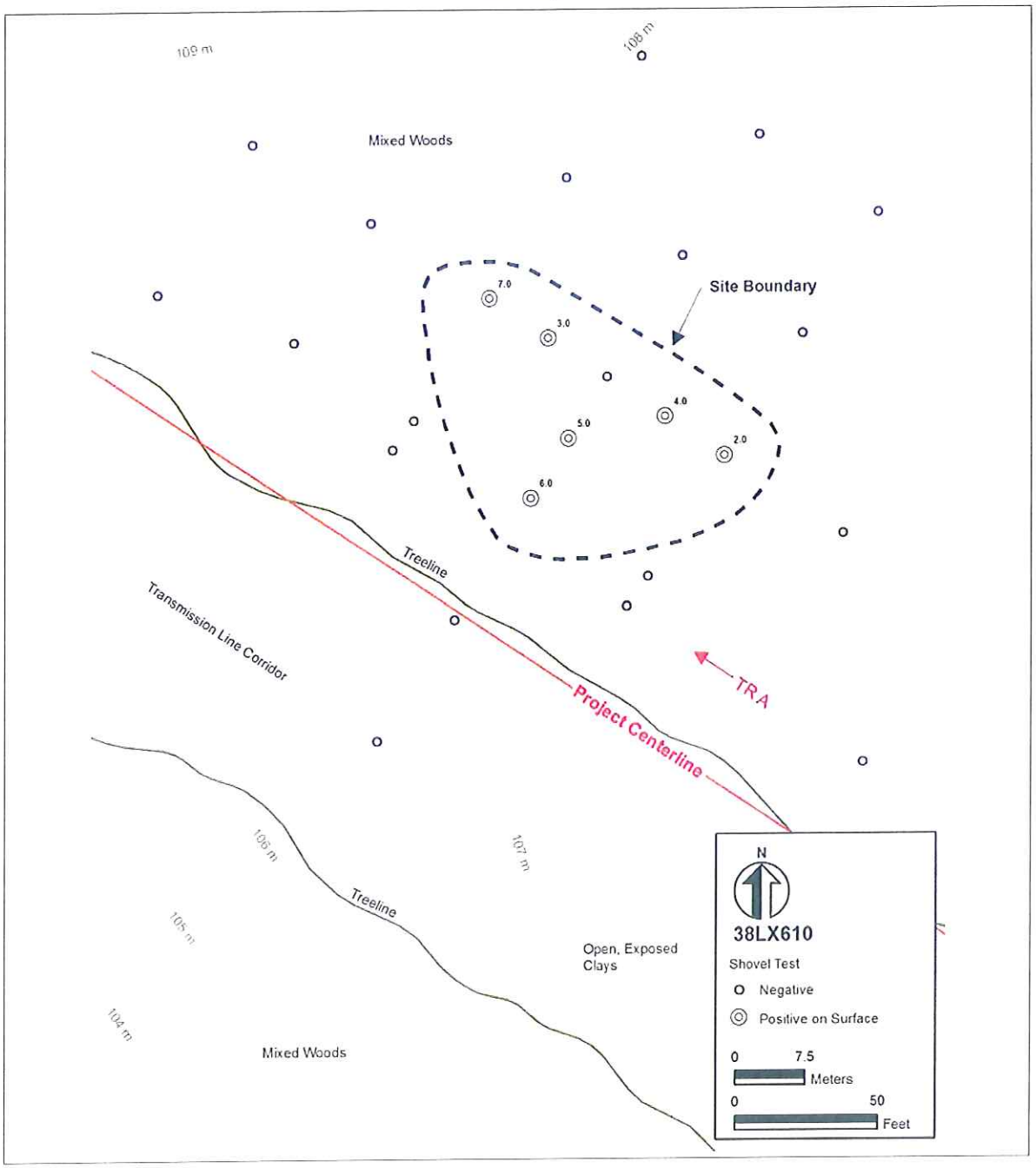
1. Estimated site dimensions: 20 meters by 45 meters
2. Site depth: 0 cm.
3. Cultural features (type and number):

4. Presence of (circle): midden floral remains faunal remains shell charcoal
5. Human skeletal remains (circle): present absent preservation (circle): good poor
6. General site description:
   Site is a low density prehistoric artifact scatter of lithic debitage located on a ridge along an existing powerline corridor. Site is located in mixed woods with eroded soils.

(Use in conjunction with handbook)

Site Number: 38LX610

Site Map



The following information should be provided on the site map: site boundaries, nearby topographic features, associated streams, modern cultural features, different land use types in site area, collection loci, test excavation loci, archaeological features and means of access (include north arrow and scale).

MAP KEY: (see map)

Verbal description of location:

From Crooked Creek Road travel north to the exit ramp of I-26. Behind the residence located on the eastern side of the dead end, travel west approximately 1.4 miles along powerline corridor. Site is located along the northern portion of the easement.

. ARCHAEOLOGICAL COMPONENTS

____	Paleo Indian	____	Middle Woodland	____	17th Century
____	Early Archaic	____	Late Woodland	____	18th Century
____	Middle Archaic	____	Mississippian	____	19th Century
X	Late Archaic	X	Unknown prehistoric	____	20th Century
X	Early Woodland	____	16th Century	____	Unknown historic

E. DATA RECOVERED

List materials recovered: Total number of artifacts: 42

Quartz Non Cortical Flakes, Quartz Biface Reduction Flakes, Quartz Biface Tools, PP/K Otarre (1), PP/K Yadkin (1), Milky Quartz reduction flakes

(Attach additional artifact inventory sheets if needed)

F. DATA RECOVERY METHODS

Ground surface visibility (circle one): 0% 1-25% 26-50% 51-75% 76-100%

. Number of person hours spent collecting (total hours X total people): 2

3. Description of surface collection methods (circle):

Type: grid collection
grab collection
controlled sampling
other (specify): ____

Extent: complete
selective
no collection made

4. Description of testing methods (circle):

Systematic
Nonsystematic

Type visual inspection

Test units:

Number	Size/max. depth	
1	0	cm.
____	____	cm.
____	____	cm.

5. Description of excavation units:

Number	Size/max. depth	
____	____	cm.
____	____	cm.
____	____	cm.
____	____	cm.

Comments: ____

G. MANAGEMENT INFORMATION

1. Present land use (circle):

Agricultural
Forest
Fallow
Residential, low density
Residential, high density
Commercial
Industrial
Other (specify) ____

Site Number: 38LX610

MANAGEMENT INFORMATION (Cont.)

2. Present condition/integrity of site (circle):
   Intact | **Damaged**
   Extent of damage: | light | moderate | heavy
   Nature of damage: | **erosion** | cultivation | logging | construction/development | vandalism | inundation | other (specify) _____

3. Potential impacts and threats to site (circle):
   Potential threat: none | low | moderate | **high**
   Nature of threat: erosion | cultivation | logging | **construction/development** | vandalism | inundation | other (specify) _____
   | direct impact zone | indirect impact zone | outside impact zone | indeterminate

4. Recommendations for further work (circle):
   survey | testing | excavation | archival | **none** | other: _____
   Comments: _____

5. References (circle): Historic/archival documentation — Yes | **No** | Not Known
   Archaeological documentation — Yes | **No** | Not Known

6. Additional management information/comments:
   No further management of the site is warranted.

7. Location of existing collections: Brockington & Associates, Inc.
8. Location of photographs: Brockington & Associates, Inc.
9. Location of special samples: None Taken
   Type of special samples: None Taken

Signature of observer: _____ Date: 7/12/2011

Subsequent visits:
Observer _____ Date: _____
Observer _____ Date: _____
Observer _____ Date: _____

SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA
SITE INVENTORY RECORD
(68-1 Rev. 85)

STATE: SC COUNTY: Lexington County SITE NUMBER: 38LX611
Recorded By: A. Pappas Affiliation: Brockington & Associates, Inc. Date: 5/9/2011

A. GENERAL INFORMATION

1. Site name: FS - 3 Project: Phase I Arch Surv. of the PIKE 230kV Tran Line St. George Segment
2. USGS Quadrangle: Chapin Date: Scale: 7.5 or 15 minute (circle one)
3. UTM: Zone 17N Easting 469434 Northing 3781944
4. Other map reference: County Road Map
5. Descriptive site type (see handbook):
   Prehistoric Lithic Scatter Historic
6. Archaeological investigation (circle): Survey Testing Excavation
7. Property owner: Unknown Phone number:
8. Address:
9. Other site designations:
10. National Register of Historic Places status (circle one):
    Potentially eligible Probably not eligible Additional work

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Office Use Only

Determined eligible On NRHP Date _____ Determined not eligible Date _____

---

11. Level of significance (circle): National State Local
12. Justification:

B. ENVIRONMENT AND LOCATION

1. General physiographic province (circle):
   Lower Coastal Plain Middle Coastal Plain Upper Coastal Plain
   Piedmont Blue Ridge Mountains
2. Landform location: Ridge Site elevation (above MSL): 403 (in feet)
3. On site soil type: very fine sandy loam Soil classification: Georgeville
4. Major river system (circle): Pee Dee Santee Ashley-Combahee-Edisto Savannah
5. Nearest river/stream: Risters Creek
6. Current vegetation (circle): Pine/coniferous Hardwood Mixed pine/hardwood
   Old field Grass/pasture Agricultural/crops Wetlands/freshwater
   Wetlands/saltwater Other Comments:
7. Description of groundcover (circle): Absent Light Moderate Heavy

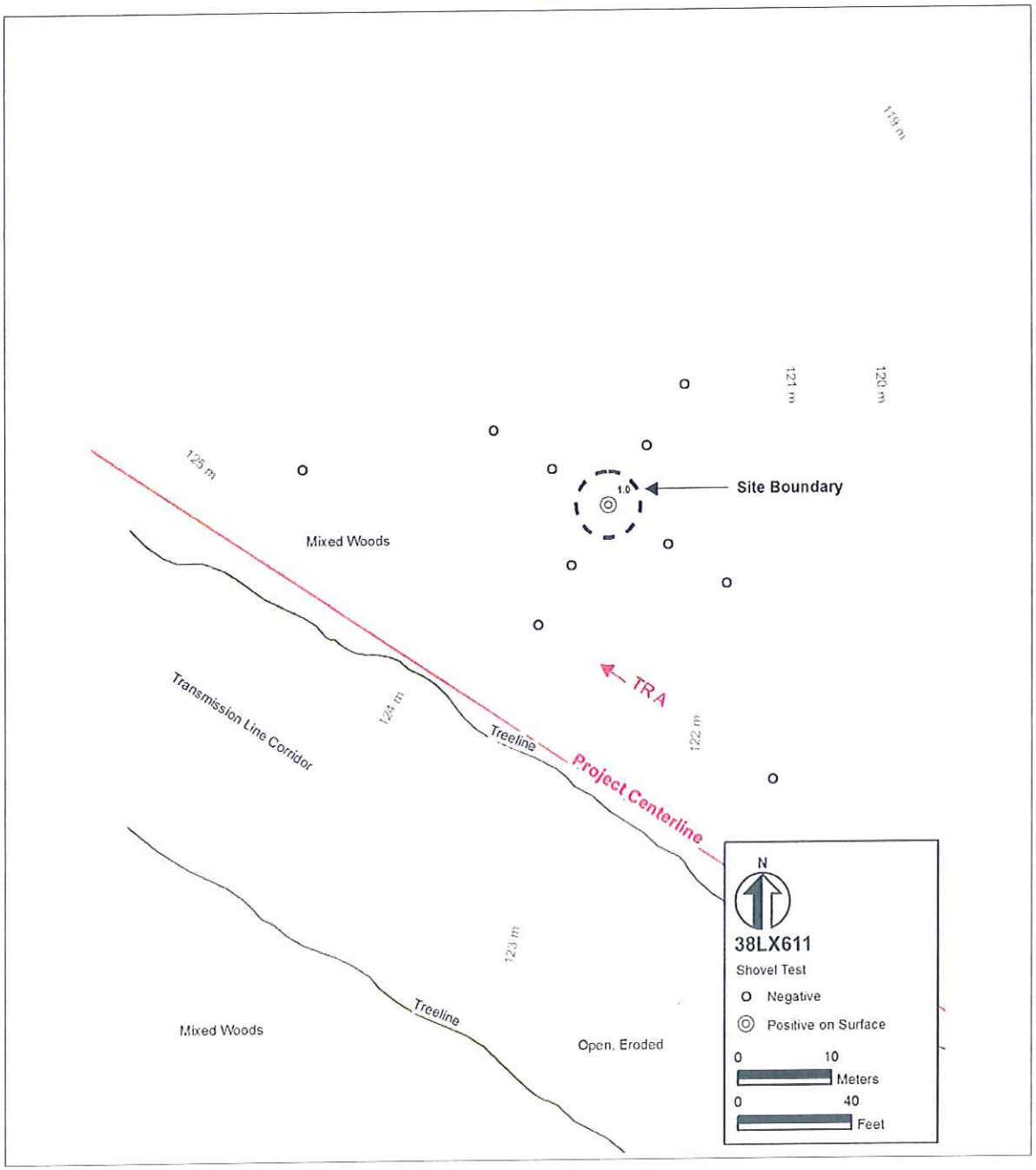
C. SITE CHARACTERISTICS

1. Estimated site dimensions: 15 meters by 30 meters
2. Site depth: 0 cm.
3. Cultural features (type and number):
4. Presence of (circle): midden floral remains faunal remains shell charcoal
5. Human skeletal remains (circle): present absent preservation (circle): good poor
6. General site description:
   Site is a low density prehistoric artifact scatter of lithic debitage located on a ridge along an existing powerline corridor. Site is located in mixed woods with eroded soils.

(Use in conjunction with handbook)

Site Number: 38LX611

Site Map



The following information should be provided on the site map: site boundaries, nearby topographic features, associated streams, modern cultural features, different land use types in site area, collection loci, test excavation loci, archaeological features and means of access (include north arrow and scale).

MAP KEY: (see map)

Verbal description of location:

Site is located from Ellet Road south of Brentwood court along a preexisting transmission line corridor in Chapin, SC. Site is located approximately 1.4 miles from Ellet Road along transmission line ROW.

Site Number: 38LX611

D. ARCHAEOLOGICAL COMPONENTS

___	Paleo Indian	X	Middle Woodland	___	17th Century
___	Early Archaic	___	Late Woodland	___	18th Century
___	Middle Archaic	___	Mississippian	___	19th Century
___	Late Archaic	X	Unknown prehistoric	___	20th Century
X	Early Woodland	___	16th Century	___	Unknown historic

E. DATA RECOVERED

List materials recovered: Quartz PP/K Yadkin (1), Quartz Biface Tool Fragment (1), Quartz non-cortical flake (2)

Total number of artifacts: 4

(Attach additional artifact inventory sheets if needed)

F. DATA RECOVERY METHODS

1. Ground surface visibility (circle one): 0% 1-25% 26-50% 51-75% 76-100%
2. Number of person hours spent collecting (total hours X total people): 2
3. Description of surface collection methods (circle):
   Type: grid collection / grab collection / controlled sampling / other (specify): ___
   Extent: complete / selective / no collection made
4. Description of testing methods (circle):
   Systematic / Nonsystematic
   Type: visual inspection
   Test units:

Number	Size/max. depth
1	0 cm.
___	___ cm.
___	___ cm.

5. Description of excavation units:

Number	Size/max. depth	Comments:
___	___ cm.	
___	___ cm.	
___	___ cm.	
___	___ cm.	

G. MANAGEMENT INFORMATION

1. Present land use (circle):
   Agricultural / Forest / Fallow / Residential, low density / Residential, high density / Commercial / Industrial / Other (specify) ___

Site Number: 38LX611

MANAGEMENT INFORMATION (Cont.)

2. Present condition/integrity of site (circle):
   Intact | **Damaged** | Extent of damage: | light | moderate | heavy | Nature of damage: | **erosion** | cultivation | logging | construction/development | vandalism | inundation | other (specify) _____

3. Potential impacts and threats to site (circle):
   Potential threat: none | low | moderate | **high**
   Nature of threat: erosion | cultivation | logging | **construction/development** | vandalism | inundation | other (specify) _____
   Nature of threat: | direct impact zone | indirect impact zone | outside impact zone | indeterminate

4. Recommendations for further work (circle):
   survey | testing | excavation | archival | **none** | other: _____
   Comments: _____

5. References (circle): Historic/archival documentation — Yes | **No** | Not Known
   Archaeological documentation — Yes | **No** | Not Known

6. Additional management information/comments:
   No further management of the site is warranted.

7. Location of existing collections: Brockington & Associates, Inc.
8. Location of photographs: Brockington & Associates, Inc.
9. Location of special samples: None Taken
   Type of special samples: None Taken

Signature of observer: _____ Date: 7/12/2011

Subsequent visits:
Observer _____ Date: _____
Observer _____ Date: _____
Observer _____ Date: _____

SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA
SITE INVENTORY RECORD
(68-1 Rev. 85)

STATE: SC COUNTY: Lexington County SITE NUMBER: 38LX612
Recorded By: A. Pappas Affiliation: Brockington & Associates, Inc. Date: 5/9/2011

A. GENERAL INFORMATION

1. Site name: FS - 4 Project: Phase I Arch Surv. of the PIKE 230kV Tran Line St. George Segment
2. USGS Quadrangle: Chapin Date: _____ Scale: 7.5 or 15 minute (circle one)
3. UTM: Zone 17N Easting 468728 Northing 3782410
4. Other map reference: County Road Map
5. Descriptive site type (see handbook):
   Prehistoric Lithic Scatter Historic Historic Scatter
6. Archaeological investigation (circle): Survey Testing Excavation
7. Property owner: Unknown Phone number: _____
8. Address: _____
9. Other site designations: _____
10. National Register of Historic Places status (circle one):
    Potentially eligible Probably not eligible Additional work

---

Office Use Only

Determined eligible Determined not eligible Date _____
On NRHP Date _____

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11. Level of significance (circle): National State Local
12. Justification: _____

B. ENVIRONMENT AND LOCATION

1. General physiographic province (circle):
   Lower Coastal Plain Middle Coastal Plain Upper Coastal Plain
   Piedmont Blue Ridge Mountains
2. Landform location: ridge side slope Site elevation (above MSL): 338 (in feet)
3. On site soil type: very fine sandy loam Soil classification: Georgeville
4. Major river system (circle): Pee Dee Santee Ashley-Combahee-Edisto Savannah
5. Nearest river/stream: Risters Creek
6. Current vegetation (circle): Pine/coniferous Hardwood Mixed pine/hardwood
   Old field Grass/pasture Agricultural/crops Wetlands/freshwater
   Wetlands/saltwater Other Comments: _____
7. Description of groundcover (circle): Absent Light Moderate Heavy

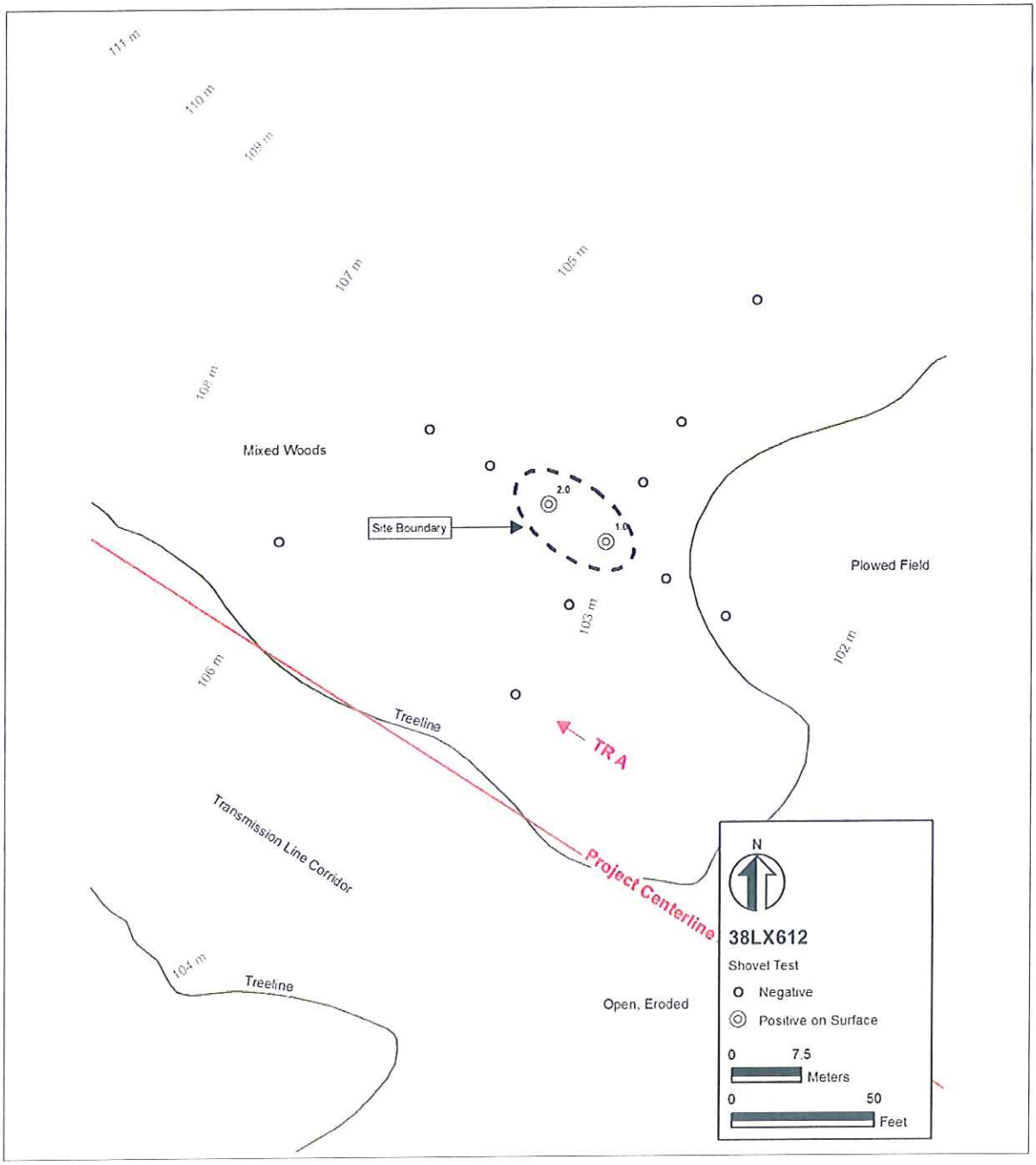
C. SITE CHARACTERISTICS

1. Estimated site dimensions: 15 meters by 15 meters
2. Site depth: 0 cm.
3. Cultural features (type and number): _____
4. Presence of (circle): midden floral remains faunal remains shell charcoal
5. Human skeletal remains (circle): present absent preservation (circle): good poor
6. General site description:
   Site is a low density historic artifact and prehistoric lithic scatter. Site was identified through surface inspection which noted a small and concentrated deposit of 11 artifacts located on a ridge side slope.

(Use in conjunction with handbook)

Site Number: 38LX612

Site Map



The following information should be provided on the site map: site boundaries, nearby topographic features, associated streams, modern cultural features, different land use types in site area, collection loci, test excavation loci, archaeological features and means of access (include north arrow and scale).

MAP KEY: (see map)

Verbal description of location:

Site is located between Ellet Road and Summer Court in Chapin, South Carolina along a preexisting transmission line ROW. Site is located approximately .5 miles northeast of Ellet Road and .5 miles southeast of Summer Court.

Site Number: 38LX612

D. ARCHAEOLOGICAL COMPONENTS

___	Paleo Indian	___	Middle Woodland	___	17th Century
___	Early Archaic	___	Late Woodland	X	18th Century
___	Middle Archaic	___	Mississippian	X	19th Century
___	Late Archaic	X	Unknown prehistoric	X	20th Century
___	Early Woodland	___	16th Century	___	Unknown historic

E. DATA RECOVERED

List materials recovered: Total number of artifacts: 11

Pearlware (1), whiteware (3), olive green glass (1), blue and white molded glass jewelry stone (1), kaolin pipestem (1), quartz biface fragment (2), milky quartz lithic fragments (2)

(Attach additional artifact inventory sheets if needed)

F. DATA RECOVERY METHODS

2. Ground surface visibility (circle one): 0% 1-25% 26-50% 51-75% 76-100%
   Number of person hours spent collecting (total hours X total people): 2
3. Description of surface collection methods (circle):
   Type: grid collection / grab collection / controlled sampling / other (specify): ___
   Extent: complete / selective / no collection made
4. Description of testing methods (circle):
   Systematic / Nonsystematic
   Type: visual inspection

Test units: Number	Size/max. depth	
1	0	cm.
___	___	cm.
___	___	cm.

5. Description of excavation units:

Number	Size/max. depth	
___	___	cm.
___	___	cm.
___	___	cm.
___	___	cm.

Comments: ___

G. MANAGEMENT INFORMATION

1. Present land use (circle):
   Agricultural / Forest / Fallow / Residential, low density / Residential, high density / Commercial / Industrial / Other (specify) ___

MANAGEMENT INFORMATION (Cont.)

2. Present condition/integrity of site (circle):
Intact [Damaged] Extent of damage -> | light | moderate | heavy
Nature of damage -> [erosion] | cultivation | logging | construction/development | vandalism | inundation | other (specify) _____

3. Potential impacts and threats to site (circle):
Potential threat: none | low | moderate | [high]
Nature of threat: erosion | cultivation | logging | [construction/development] | vandalism | inundation | other (specify) _____
-> | direct impact zone | indirect impact zone | outside impact zone | indeterminate

4. Recommendations for further work (circle):
survey testing excavation archival [none] other: _____
Comments: _____

5. References (circle): Historic/archival documentation Yes [No] Not Known
Archaeological documentation Yes [No] Not Known

6. Additional management information/comments:
No further management of the site is warranted.

7. Location of existing collections: Brockington & Associates, Inc.
8. Location of photographs: Brockington & Associates, Inc.
9. Location of special samples: None Taken
Type of special samples: None Taken

Signature of observer: _____ Date: 7/12/2011

Subsequent visits:
Observer _____ Date: _____
Observer _____ Date: _____
Observer _____ Date: _____

APPENDIX C: RESUMES OF THE KEY PERSONNEL

RALPH BAILEY

PRINCIPAL INVESTIGATOR

EDUCATION

M.A. in History (1997), The Citadel and The University of Charleston

B.A. in Anthropology (1990), The George Washington University

CONTINUING EDUCATION

Archaeology Law Enforcement Course (US Army Corps of Engineers)

Cultural Resources Law Course (US Navy)

Advanced Section 106 Course (ACHP)

Applying the NEPA Process (The Shipley Group)

FERC Environmental Review and Compliance (FERC)

AREAS OF SPECIALIZATION

Project Management

Cultural Property Law (NEPA, Section 106, Agreement Documents)

Transportation Projects (DOT, FHWA, County Sales Tax)

Historic Archaeology

Cemetery Documentation and Relocation

PROFESSIONAL SOCIETY MEMBERSHIPS

Register of Professional Archaeologists

Council of South Carolina Professional Archaeologists

Southeastern Archaeological Conference

Archaeological Society of South Carolina

PROFESSIONAL POSITIONS

Branch Chief, Brockington and Associates, Inc., (2002-present)

Archaeologist/Historian, Brockington and Associates, Inc., (1997-2001)

Research Associate, Brockington and Associates, Inc., (1993-1996)

PROJECTS, PUBLICATIONS, AND PAPERS

2010 (with Josh Fletcher)

Cultural resources survey of several interchange safety improvement projects across the state of South Carolina. Prepared for the South Carolina Department of Transportation.

2010 (with Andrew Agha, Carol Poplin and Nicole Isenbarger

Dean Hall Plantation. Project Manager for the survey and data recovery investigations of the Antebellum slave village of Dean Hall Plantation. The work included an MOA, technical report, and interpretive museum exhibit. The project was conducted for the DuPont Corporation and Berkeley County, South Carolina.

2009 East Edisto. This 80,000+ acre project is the largest master planned project in the country. The project included an oral history program, a reconnaissance level study of the entire tract, as well as survey and testing investigations on five development tracts ranging from a few hundred to several thousand acres. The project required numerous public meetings throughout the project region.

2009 (with Inna Moore)

Relocation of a Portion of Hampstead Cemetery, 46 Reid Street, Charleston, SC. Prepared for the Charleston housing Authority. Working with the Housing Authority, City Council, and St. Matthews Church we excavated and relocated 437 graves to Bethany Cemetery.

2007 (with D. Baluha, I. Burns, E. Salo, and T. Whitley)

Cultural Resources Survey of the Proposed I 73 Southern Corridor, Dillon, Marion, and Horry Counties, South Carolina. Prepared for the SC Department of Transportation, the LPA GROUP, INC. and Wilbur Smith.

2007 (with Andrew Agha and Ed Salo)

Cultural Resources Survey of the Proposed Lee Nuclear Station, Cherokee County, South Carolina. Prepared for Duke Energy Carolinas. This multi-phase project involves consultation with the Nuclear Regulatory Commission, the SHPO, and the Eastern Band of the Cherokee Indians. The work is being completed in partial compliance with the NRC's combined Construction and Operating License regulations.

2007 *Integrated Cultural Resources Management Plan, Naval Weapons Station Charleston, Update.* Prepared for the Navy Engineering Command, Southern Division, North Charleston, South Carolina.

2006 (with Kristrina Shuler and Charles F. Philips)

A History of the Phosphate Industry in South Carolina with a Focus on the Ashley Phosphate Company. *South Carolina Antiquities,* vol. 38: 1 and 2.

2005 (with Charles F. Philips)

"As Mobile Goes, so Goes the Corps," A Look at Change Inside a Government Agency: US Army Corps of Engineers: 1985-2003. Prepared for the Mobile District, Mobile, Alabama.

2005 Cultural Resources Assessment of the Riverstone Docks Project, Lake Keowee, South Carolina. Project involved Section 106 consulting with the Eastern Band of the Cherokee Nation and FERC on behalf of Duke Energy's Crescent Resources.

2005 (with Eric C. Poplin and Kristrina A. Shuler)

Cemetery Relocation at Site 38CH1648, Johnson Hagood Stadium, The Citadel, Charleston County, South Carolina. Prepared for The Citadel.

2004 (with Brent Lansdell)

Cultural Resources Assessment and Preservation Plan for the Saluda Dam Remediation Project, Lake Murray, South Carolina. Project conducted for SCE&G under a Programmatic Agreement with FERC and the SHPO.

2004 National Register of Historic Places Assessment of Cummings Point and Morris Island, Charleston Harbor, South Carolina. Project involved consultation with SHPO, the NPS, SCDNR, and other interested parties on behalf of the owners.

2004 (with Scott Butler, Brent Lansdell, and Charles F. Philips)

Archaeological Testing of 38CH463, 38CH1774, 38CH1775, and 38CH1777 and Assessment of Grimball's Causeway and Manigault's Siege Line, Grimball Farms, Charleston County, South Carolina. Prepared for The GInn Company, Mt. Pleasant, South Carolina.

2003 (with Kristrina A. Shuler)

Archaeological Survey of the Berlin Parkway (SC Route 165) Extension Project, Alternate 2 Dorchester County, South Carolina. Prepared for The South Carolina Department of Transportation, Columbia, South Carolina and Davis & Floyd, Inc. Greenwood, South Carolina.

2003 (with Kristrina A. Shuler and Pat Hendrix)

Cemetery Relocation at the Future Site of the Children's Research Institute Medical University of South Carolina, Charleston County, South Carolina. Prepared for the Medical University of South Carolina, Charleston, South Carolina.

2002 (with Pat Hendrix, Carol Poplin, and Bruce Harvey)

Cultural Resources Management Plan for the City of North Charleston, Planning Area Three, Dorchester County, South Carolina. Prepared for the City of North Charleston and the South Carolina Department of Archives and History.

2002 (with Bruce G. Harvey)

Intensive Cultural Resources Survey and Documentation of the Proposed Cooper River Bridge Approaches, Charleston County, South Carolina. Prepared for the South Carolina Department of Transportation and Wilbur Smith Associates, Columbia.

ANDREW A. PAPPAS

Archaeologist / Author

EDUCATION

M.A. Archaeology (2004) Florida State University

B.A. Anthropology (2000) University of Florida

AREAS OF SPECIALIZATION

Cultural Resources Management

Archaeological Investigations and Documentation

Historic Period and Contact Era

Subterranean Archaeology and Hydrology

PROFESSIONAL SOCIETY MEMBERSHIP

Register of Professional Archaeologists

America Anthropological Association

Georgia Council for Professional Archaeologists

Society for Historical Archaeology

PROFESSIONAL POSITION [2004 - PRESENT]

Archaeologist, Project Manager, Principal Investigator

PROJECTS, PUBLICATIONS, AND PAPERS

2010 Principal Investigator, Phase II Archaeological Survey and Testing at Powder Magazine Park, Montgomery County, Alabama. Prepared for USACE, Mobile District.

2010 Principal Investigator, Phase I Cultural Resources Survey of the PIKE Twelve Mile Creek 100-kv Tap Line, Union County, North Carolina. On File NCOSA, Raleigh, North Carolina.

2010 Principal Investigator, Technical Memorandum for Record of No Significant Findings; Phase I Cultural Resources Survey of the Sugar Mountain Substation, Avery, North Carolina. Report Pending NCSHPO Review.

2010 Principal Investigator, Technical Memorandum for Record of No Significant Cultural Findings; Phase I Cultural Resources Survey of Good Neighbor Creek Mitigation Bank, Dawson County, Georgia. Report Pending USACE, Savannah District Review.

2009 Principal Investigator, A Phase I Archaeological Resources Survey of the Fox Creek High School, Edgefield County, South Carolina. Report Submitted to the Fox Creek High School Board of Directors, North Augusta, South Carolina.

2009 Principal Investigator, Phase III Data Recovery at Site 9HY321 (Walnut Creek Field Site 2), Henry County, Georgia. Prepared for the Georgia Department of Transportation

2009 Principal Investigator, A Phase I Archaeological Resources Survey of the 25 Acre Volunteer Army Ammunitions Plant Tract, Hamilton County, Tennessee. Prepared for CH2M Hill, Atlanta, Georgia.

2009 Principal Investigator, A Phase I Cultural Resources Survey of the 19.13-Acre San Marcos Tract, Hays County, Texas. Prepared for the USACE, Mobile District.

2009 Principal Investigator, A Phase I Cultural Resources Survey of the 17-Acre Round Rock Tract, Williamson County, Texas. Prepared for the USACE, Mobile District.

2009 Principal Investigator, Technical Memorandum for Record of No Significant Archaeological Findings; Phase I Archaeological Survey of the Nebo – New Georgia 115 kV Transmission Line, Paulding County, Georgia. Project #: P76630; Contr. #:602027 GTC-13-CB-88). Prepared for the Georgia Transmission Corporation.

2009 Principal Investigator, Phase II Archaeological Evaluation of Site 40MI213, Chicago Bridge and Iron, Nuclear Fabrication Facility Tract, Marion County, Tennessee. Prepared for Chicago Bridge and Iron, Texas.

2009 Principal Investigator, Cultural Resources Survey and Evaluation of the Rockingham Farms Tract, Chatham County, Georgia. Prepared for the Rockingham Investment Group LLC and the USACE, Savannah District.

2009 Principal Investigator, Principal Investigator, Phase I Cultural Resources Survey of the 360-Acre Plant Wansley Tract, Heard County, Georgia. Prepared for The Georgia Power Company.

2009 Principal Investigator, Phase I Cultural Resources Survey of the Big Shanty Connector, Cobb County, Georgia. Prepared for EMC Engineering Services, Inc. Roswell, Georgia.

2009 Principal Investigator, A Phase I Archaeological Resources Survey of the Howard Road Tract, Hall County, Georgia. Prepared for Register-Nelson, Inc. McDonough, Georgia.

2009 Principal Investigator, NRHP Categorical Exclusion Worksheet; The Big Creek Park Greenway Connection, Fulton County, Georgia. Prepared for Associate Engineering Consultants, Inc.

2009 Principal Investigator, Phase I Cultural Resources Survey of the Crossgate Road Property, Chatham County, Georgia. Prepared for Eco-Science, Inc. Savannah, Georgia.

2009 Principal Investigator, Phase I Archaeological Resources Survey of the GPC Hancock County Tract, Hancock County, Georgia. Prepared to The Georgia Power Company.

2009 Principal Investigator, Phase I Cultural Resources Survey of the Riverside Parkway Relocation Tract, Floyd County, Georgia

2009 Principal Investigator, A Phase I Archaeological Resources Survey of the Proposed Windy Hill / Macland Road Connector, Cobb County, Georgia. Prepared for Greenhorne and O'Mara contractor for Cobb County Department of Transportation.

2009 Principal Investigator, A Phase I Archaeological Resources Survey of State Road 52, Overton County, Tennessee. Prepared for Palmer Engineering, Inc. Kentucky.

2009 Principal Investigator, A Phase I Cultural Resource Survey of Approximately 32 Acres Along Hemphill Bend for the Proposed Black Warrior River Upland Soil Disposal Area. On file USACE, Mobile District.

2009 Principal Investigator, A Phase I Cultural Resources Survey of the 6-Acre Sioux City Armed Forces Reserve Center, Woodbury County, Iowa. Prepared for the USACE, Mobile District. Prepared for USACE, Mobile District.

2009 Principal Investigator, Archaeological Assessment of the Cave Spring Water System Expansion Corridoes and Tracts, Floyd County, Georgia and Cherokee County, Alabama. Prepared for Williams, Sweitzer, and Barnum, Inc. Rome, Georgia.

2009 Principal Investigator, Phase I Cultural Resources Survey of the Campus Crest Phase II Development Tract, Baldwin County, Georgia. Prepared for Campus Crest Development, Charlotte, North Carolina.

2009 Principal Investigator, Technical Memorandum for Record of No Significant Archaeological Findings; Phase I Archaeological Survey of the 14-Acre North Wind Tract, Forsyth County, Georgia. Prepared for North Wind, Inc. Greenville, South Carolina.

2009 Principal Investigator, Phase I Cultural Resources Survey of the 150-Acre Sanders Tract, Jasper County, South Carolina. Prepared for the Sembler Company, Atlanta, Georgia.

2009 Principal Investigator, Phase I Archaeological Resources Survey of ~1500 ft. of New Proposed Alternative for Matthew Perry Parkway, Spartanburg County, South Carolina. Prepared for Florence & Hutcheson, Inc.Columbia, South Carolina.

2009 Project Manager, A Class I Inventory Record of 22 USDI Bureau of Land Management Surface Tracts, Baxter, Cleburne, Crawford, Fulton, Pike, Searcy, Sharp, and Van Buren Counties, Arkansas

2008 Principal Investigator, A Phase I Archaeological Resources Survey of the 25 Acre Volunteer Army Ammunitions Plant Tract, Hamilton County, Tennessee

2008 Principal Investigator, A Phase I Cultural Resources Survey of the 19.13-Acre San Marcos Tract, Hays County, Texas

2008 Principal Investigator, A Phase I Cultural Resources Survey of the 17-Acre Round Rock Tract, Williamson County, Texas

2008 Principal Investigator, Technical Memorandum for Record of No Significant Archaeological Findings; Phase I Archaeological Survey of the Nebo – New Georgia 115 kV Transmission Line, Paulding County, Georgia. Project #: P76630; Contr. #:602027 (GTC-13-CB-88)

2008 Principal Investigator, Phase II Archaeological Evaluation of Site 40MI213, Chicago Bridge and Iron, Nuclear Fabrication Facility Tract, Marion County, Tennessee

2008 Principal Investigator, Phase I Cultural Resources Survey of the Big Shanty Road Tract, Cobb County, Georgia.

2008 Principal Investigator, A Phase I Archaeological Resources Survey of the Howard Road Tract, Hall County, Georgia.

2008 Principal Investigator, Phase I Cultural Resources Survey of the Crossgate Road Property, Chatham County, Georgia.

2008 Principal Investigator, Phase I Archaeological Resources Survey of the GPC Hancock County Tract, Hancock County, Georgia.

2008 Principal Investigator, Phase I Cultural Resources Survey of the Riverside Parkway Relocation Tract, Floyd County, Georgia.

2008 Project Manager, A Phase I Archaeological Resources Survey of the Proposed Windy Hill / Macland Road Connector, Cobb County, Georgia.

2007 Principal Investigator, A Phase I Archaeological Resources Survey of the Fox Creek High School, Edgefield County, South Carolina.

2007 Principal Investigator, A Phase I Archaeological Resources Survey of the Imerys Mine (Burren Tanner Tract), Washington County, Georgia.

2007 Principal Investigator, Phase I Archaeological Resources Survey of the I-20 Post Office Drive Property, Dekalb County, Georgia.

2007 Principal Investigator, Phase I Archaeological Resources at the Chattooga Creek Banks, Walker County, Georgia.

2007 Principal Investigator, Human Skeletal Recovery and Investigation at the Bartow County Tract, Bartow County, Georgia.

2007 Principal Investigator, Archaeological Survey and Testing of the A.E. Harris and Wimberly Tracts, Houston County, Georgia.

2007 Principal Investigator, Phase I Archaeological Resources Survey of the Bowater Tract, Cherokee County, Georgia.

2007 Principal Investigator, Phase I Archaeological Resources Survey of the Komatsu Tracts I and II, Bartow County, Georgia.

2006 Principal Investigator, Phase I Survey and Site Evaluation of the Fowler Road Tract, Forsyth County, Georgia.

2006 Principal Investigator, Phase I Archaeological Resource Survey of the Little Sandy Creek Bank Mitigation, Butts County, Georgia.

2006 Principal Investigator, Phase I Cultural Resource Survey and Site Evaluation of the Komatsu Site 1 Property, Bartow County, Georgia.

2005 Project Manager, Phase II Cultural Resource Assessment of the Twin Creeks DRI Property, St. johns County, Florida.

2005 Project Manager, Phase II Cultural Resource Assessment of the Jacksonville Multi-Modal Transportation Center, Duval County, Florida.

2005 Project Manager, Phase I Cultural Resource Assessment Survey of State Road (SR) 715 Sidewalk from SW Avenue E to the Everglades Farm Equipment Property North of the SFCD Lateral I-2 Canal, Palm Beach County, Florida.

2006 A Cultural Resource Overview Survey for Thirty-four (34) Proposed Stormwater Pond/Treatment Locations Along SR 200 (SR A1A) from the West Yulee City Limits to the Vicinity of Clements Road in Nassau County, Florida.

2005 Reconnaissance Survey of the Monserrate Property, Orange County, Florida. Report submitted by Southeastern Archaeological Research, Inc. to Bio-Tech Consulting, Inc., Orlando, Florida.

2005 Cultural Resource Survey of the Florida Gas Transmission (FGT) Phase VII Expansion Loop J, K, and G; Compressor Station 16, 24, 26, 27; FPC-Hines Meter Station, Lawtey Regulator Station, CFG-Suwannee Meter Station, Cypress Pipeline Tie-In Point, and Five Contractor and Pipe Storage Yards, Gilchrist, Levy, Hernando, Bradford, Citrus, Hillsborough, Polk, Suwannee, Clay, and Pasco Counties, Florida. Report submitted by Southeastern Archaeological Research, Inc. to The Florida Gas Transmission Company, Houston, Texas.

2005 Cultural Resource Assessment Survey of State Road 21 (Blanding Boulevard) From South of Argyle Forest Road to North of Wilson Boulevard, Duval County, Florida. Report submitted by Southeastern Archaeological Research, Inc. to The Florida Department of Transportation, District 2, Lake City, Florida.